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DUTY AND INTEREST—(I)

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1. *Aim and Scope of this Paper.*—In this paper[1] I shall try to show that "duty" derives its significance from its relation to "interest," and that the former concept cannot be understood when taken apart from its relation to the latter. Such a doctrine is, I am aware, rejected by some contemporary philosophers; and I shall, I trust, make it sufficiently clear in the sequel why I am unable to accept their view.

I am not, however, concerned primarily with criticism of other theories. This paper represents an attempt to interpret a particular province of "the common moral consciousness" and to elicit the principles there implied. I begin by accepting the view that, like natural science, ethics has its data, and that it is the business of ethics to interpret these data which are the contents of the "moral consciousness." In *Section A* I discuss various methods which may be used for the discovery of the relevant data, and suggest that initial enquiries can most fruitfully be pursued in the field of law and custom. In *Section B* I undertake an analysis of the principles of the law relating to promise-keeping. As a result of what is there found, it becomes necessary, in *Section C*, to discuss the nature of rights and their relation to interests, and, in *Section D*, the nature of duties and their relation to rights.

The conclusions to which our whole investigation leads are: that rights must be defined in terms of protection of interests; that duties are correlative to and logically consequent upon rights; and that, therefore, "duty" derives its significance from its relation to "interest."

[1] This is the work referred to in my article on "Justice" in *Philosophy*, vol. xvi, No. 61, p. 8, note 1.

SECTION A. THE DATA OF ETHICS

2. *Ethical Theory and Common Moral Ideas.*—There is a doctrine widely—though probably not universally—accepted by moral philosophers that ethical theory must be founded upon the ideas of the common moral consciousness. Individual thinkers may differ on important secondary questions—as, e.g., on the respective merits of "the plain man's" and the "educated man's" ideas—but these are differences within a more general agreement.

3. *Kant's View.*—The general doctrine referred to is accepted by Kant. "Without quitting the moral knowledge of common human reason, we have arrived at its principle. And although, no doubt, common men do not conceive it in such an abstract and universal form, yet they always have it really before their eyes, and use it as the standard of their decision. Here it would be easy to show how, with this compass in hand, men are well able to distinguish in every case that occurs, what is good, what bad, conformable to duty or inconsistent with it, if without in the least teaching them anything new, we only, like Socrates, direct their attention to the principle they themselves employ; and that therefore we do not need science and philosophy to know what we should do to be honest and good, yea even wise and virtuous."[1] But if moral philosophy is not required to teach us how to be honest and good, what is its function? Kant's answer is that philosophy is needed because innocence is, unfortunately, easily seduced. Against the commands of duty man feels powerful contrary inclinations which tempt him into the sophistical "explaining away" of the strict commands of duty. The only proper corrective to this corruption of moral principles at their source is their rational vindication by moral philosophy. The business of the moral philosopher is thus to make explicit and to defend the principles contained in the common moral consciousness.

4. *Green's View.*—If moral theory is to have any value for us, Green holds,[2] we must already be actuated by the practical moral ideal. The value "must in any case be rather negative than positive; rather in the way of deliverance from the moral anarchy which an apparent conflict between duties equally imperative may bring about, or of providing a safeguard against the pretext which in a speculative age some inadequate and misapplied theory may afford to our selfishness, than in the way of pointing out duties previously ignored." The view here may not be precisely the same as Kant's; but common to both is the notion that moral principles are essen-

[1] *Fundamental Principles of the Metaphysics of Morals*, Abbott's trans., p. 20.

[2] *Prolegomena to Ethics*, par. 311.

tially prior to moral theorizing, and that a main function of the latter is the clarification and defence of the former.

5. *Ross's View.*—A third example of the doctrine under discussion appears in the ethics of Ross. "The main moral convictions of the plain man seem to me to be, not opinions which it is for philosophy to prove or disprove, but knowledge from the start."[1] Again, "The moral convictions of thoughtful and well-educated people are the data of ethics just as sense-perceptions are the data of a natural science."[2]

6. *Need for Empirical Enquiry concerning Moral Judgments.*—Now if this general view represents the proper attitude of moral theory to the contents of the common moral consciousness, it is clear that extensive and systematic empirical enquiry is one of the essential methods of ethics. Before we can profitably theorize about the contents of the common moral consciousness we must know what, in fact, they are; and this knowledge can come only from careful empirical investigation.

As to where we should look for these data, that also seems fairly clear. Kant professes to make explicit that principle which men "use as the standard of their decision." He is, therefore, claiming to exhibit the principle which men have at the back of their minds when, in everyday life, they express practical moral judgments. Similarly, when Ross tells us that the "data of ethics" are the moral convictions of thoughtful and well-educated people (or, as he sometimes holds, of plain men), this can only mean that the data are those practical moral judgments through which convictions are expressed. Hence our empirical investigation must be concerned with those practical moral judgments.

7. *Moral Judgments are "Data," not "Premisses."*—It is important that we should be clear on the sense in which ethical theory is based upon practical moral judgments; and that we should not confuse "data" with "premisses." This confusion is, I think, inherent in Ross's ethical theory, and largely accounts for his difficulty in deciding whether he should accept as his data the convictions of the plain man or those of the thoughtful and well-educated man. It seems that Ross is not entirely happy about the plain man because he wishes to start from convictions which can be accepted as "true"; and I do not think that he would have taken this attitude had he not intended to use these convictions as "premisses." While it is true that the convictions of *both* plain and well-educated men are the data of ethics, as the contents of sense-perception are the data for a natural science, it is quite unnecessary to suppose that these convictions are "not opinions . . . but knowledge from the start." If the parallel between ethics and natural science is to hold

[1] *The Right and the Good*, p. 21, note. [2] P. 41.

—as I think it does hold—we need take these convictions only as the given facts which it is our business as moralists to render intelligible in their relation to each other—to elucidate, as Kant says, the principle (or it may be, the principles) lying behind them. As the natural scientist does not suppose that his data are "true," but only that *he* truly apprehends their character (e.g., that an animal which seems to him to be warm-blooded really is warm-blooded); so the moralist need not assume that the moral convictions which are his data are "true," but only that *he* truly apprehends their character (e.g., that a judgment which seems to him to be a condemnation of a certain kind of action really is a condemnation of that action).

My criticism here has been directed against Ross, but it is also applicable to Kant and Green in so far as they draw no clear distinction between *explaining* and *defending* the moral ideas of plain men. To "explain," in the sense of making explicit those principles which men employ in their practical moral judgments, is something quite distinct from "defending" those judgments and principles; and I think that Kant and Green sometimes tangle the lines of their argument through not keeping the two notions distinct. It may be true (although I have some doubts upon the point) that part of the moral philosopher's task is to "defend," but he must not allow this concern to intrude upon the logically prior task of "explanation."

We turn now to the question: How can we best discover those facts which, as moral theorists, it is our task to explain?

8. *Methods of Discovering the Facts:* (1) *Introspection.*—It may be suggested that, since the main convictions of the moral consciousness are convictions of consciousness, the only way to discover them is to interrogate our own minds as carefully as possible. Now introspection has its value, no doubt; but reliance upon it alone is open to at least two objections: (*a*) The only thing one can be certain about, after even the most exhaustive self-examination, is that one has apprehended one's own moral convictions. To suppose that my own convictions are the same as those of men in general, because we all share in a common nature, is surely unsatisfactory, when this supposition is set over against the undoubted fact that different men—plain and educated alike—profess to find in themselves different convictions. (*b*) I doubt whether introspection is in itself a very reliable instrument for discovering even one's own main convictions. The "convictions" which one elicits by introspection may be distorted because they are so likely to be artificially induced. The same is true of those "moral judgments" so often made in the process of reflection about morality. While I should pay the greatest respect to the judgment of a moral philosopher

when he is faced with a practical situation, I look with considerable suspicion upon those judgments which he throws off to illustrate or support some particular theory. There is no guarantee that they express his real convictions, any more than the expression of belief in a creed is a guarantee of a man's basic beliefs. They are "arm-chair judgments," like the policies of the arm-chair politician or the victories of the arm-chair general.

9. (2) *Questionnaire and Cross-examination.*—American writers, who pay more attention than we do to what I may call the empirical side of social and ethical studies, make considerable use of this second method. They present hypothetical situations involving a moral issue, elicit judgments as to what ought to be done in the circumstances, and cross-examine the respondents on their judgments and their reasons for having made those judgments.[1] This procedure is certainly not open to our first objection against the introspective method. Using it, we can at least discover what other people say their convictions are; and this is something more substantial than what we think they would say, or ought to say, if they were asked. But I think that our second criticism is relevant to some extent. The examinees are still being placed in artificial situations. They must be aware that we are primarily interested, not in the practical problems we put to them, but in the operation of their own minds. This knowledge, combined with the fact that the judgment is not made in a situation which calls for its application, may seriously impair its value as a clue to the speaker's real mind. This defect in the method may, of course, be foreseen and guarded against by skilled practitioners,[2] but it does constitute a real danger in the initial stages of the collection of moral data.

10. (3) *Study of Laws and Customs serving as Public Standards of Conduct.*—The great advantage of this method is that it is not open to either of the objections raised against the first and second methods. Systems of law are slowly built up through men's actual reactions to and judgments upon concrete situations in life; and, in so far as they can be said to offer a clue to moral ideas at all, it is obvious that they will be of special value as affording insight into the *common* moral consciousness. My own view is that the study of law and custom does indeed provide the best point of departure for ethical theory. There are, however, two suspicions likely to be entertained as to the value of this method.

The first is that, because of the generality of legal and customary standards, even the most careful study of them will fail to elicit

[1] Interesting examples may be found in F. C. Sharpe's *Ethics*, pp. 122 f., 158 ff., and especially in chap. xii on "The Influence of Authority upon Moral Judgments."

[2] See M. Jean Piaget's *The Moral Judgment of the Child*, Foreword.

the richness and variety of individual ideas. Now there is a reasonable caution underlying this objection which we ignore at our peril. But, if we are prepared to recognize the limitations of our results, we can infer certain *general* characteristics of the common moral consciousness by using the method under discussion. Having thus got our perspective, we can more safely turn to the investigation of detail by the discriminating use of methods (2) and (1). So much for the first objection.

The second suspicion with regard to this method touches a more fundamental point. I have said that the study of law and custom, *in so far as it can be said to offer a clue to moral ideas at all*, will afford insight into the common moral consciousness. Now, it may be asked, what grounds have we for supposing that it does offer any such clue? I shall devote the rest of this section to the discussion of this important question.

11. *Law and Morality not the Same.*—First, as to what we should not expect. No one supposes that legal right and wrong entirely coincide with moral right and wrong. There are many moral issues of which the law-courts take no cognisance. Indeed, legal and moral duties frequently conflict. A man may be punished for doing what is morally right if it also happens to be legally wrong. The courts of the realm are often obliged to range the force of the state behind a man who has, while keeping on the right side of the law, indulged in shameful practices towards the weak and helpless. We cannot, therefore, suppose that the contents of the law are, in every particular case, a guide to the contents of the common moral consciousness; and we must recognize that, even when the legal and the moral coincide, we are in touch with only a part of morality which extends over ground that law does not traverse.

12. *Moral Ideas and Law Related.*—But while these warnings are salutary, there is another side to the picture. Law and morality,[1] while not entirely coincident, are, as it were, intersecting circles. While their "forms" are distinguished from each other, their contents are to a considerable extent the same. This considerable community of content is inevitable just because moral ideas and legal codes exert a strong influence upon each other. Let us notice, first, the influence of moral ideas upon law.

13. *Influence of Moral Ideas on Law.*—One of the most obvious facts about codes of law is that their rules speak imperatively. They say, "This shall be done"; "That shall be left undone." They say what ought to be done. This characteristic they have in common with moral imperatives. Further inspection makes it equally obvious that the imperatives of law are not always the same. Old ones are

[1] See Hocking's "Ways of Thinking about Rights" in *Law: A Century of Progress*, vol. ii, pp. 242–265.

abandoned and new ones are issued, for the law is always changing. How is this change in the contents of the law to be explained? Amongst other factors at work, the impact of moral ideas is an important cause of change. This will be evident when we glance at the sources of civilized codes.

14. (1) *Through Judicial Decisions.*—One of the main sources is the decisions of judges on particular cases coming before them. Where there is no existing law or authoritative pronouncement relative to a particular case, the judge decides on what seems to him to be the principles of reason and equity. Courts, says Salmond,[1] are primarily and essentially courts of justice—justice according to law, so far as there is law applicable, and, so far as there is no law applicable, justice "according to nature." Salmond uses "natural justice" and "moral justice" as equivalent terms. Thus, into the law of the realm there are always being introduced decisions of moral right and wrong according to the conscience and insight of the judges.[2]

We must not, of course, exaggerate the influence of the judicial conscience on the creation of law in modern civilized states. Where there is a permanent legislative body such as the British Parliament, judicial legislation is kept down to the minimum. Indeed, many lawyers are reluctant to admit that the judge does more than declare the law. I understand that counsel, in their pleadings, work as far as possible within the assumption that the function of the judge is to declare. Thus, they will not say "Here is a case for which the law offers no guidance; we wish you to make a rule." They will tend to say rather, "Here is a case the appropriate rule for which is unusually difficult to determine." They then proceed to cite what they claim to be analogous cases, and to suggest that the relevant rule is therefore "such and such a one." They then ask for a judicial pronouncement as to which of the proposed rules is really the appropriate one.

The judge, on his side, is most reluctant to appeal to the bare principle of equity. If no clear rule exists, he will try to give a decision which harmonizes with the existing body of law, even when his private opinion might be that a different decision would be more "naturally just."

But when all this is admitted, modern jurists agree that the conception of the judge's function as merely declaratory is a polite fiction; and that, when the history of the law is considered over a relatively long period, it becomes quite clear that judicial declara-

[1] *Jurisprudence*, 8th edit., pp. 39–41.

[2] See Bryce, *Studies in History and Jurisprudence* (vol. i, p. 118) for some interesting comments on the judicial machinery of India; Salmond, chaps. ii, iii, and iv; and C. K. Allen, *Law in the Making*, 1st edit., chaps. iii, iv, and v.

tions have perceptibly created law under the influence of an ideal variously described as "the reasonable," "the equitable," "natural justice."

15. (2) *Through Legislation.*—A second source of law is the activity of the state legislature. In early society, no doubt, there was very little legislation in our sense of the term. But law derived from this source has steadily increased in volume, and in our day the legislature has almost ceased to know what rest means.

What are the influences determining the character of the laws parliament is continuously placing upon the statute book? These influences are of different kinds; but of major importance is the body of convictions, held by society and by groups within society, as to what is right and wrong. Acts for the suppression of religious sects, and subsequent toleration acts, reforms in the electoral system, the granting of civic rights to women, the abolition of slavery, laws governing marriage and divorce, the control of working hours and conditions, measures for the protection of children and the lower animals, the poor law, the education acts, the statutes governing the relations of Great Britain to other members of the Commonwealth—these and other measures are largely dictated by (however far they may fall short of satisfying) the ideas of various sections of the community on what is reasonable and just. And "reasonable and just," here, does not mean merely "legally binding." The provisions are made legally binding because there is a sufficiently powerful belief that they are "naturally or morally" just. The part played by moral ideas may perhaps be roughly gauged by reading reports of debates on important measures before parliament.

16. (3) *Through Custom.*—A third source of law is ancient custom. Custom naturally decreases in importance as legal systems develop; but this is largely because custom becomes gradually incorporated in judge-made or enacted law—unless it is expressly rejected or repealed. That is to say, the content of what was originally custom is preserved under a different form. Now custom is not indifferent to social opinion on questions of right and wrong. "Custom is to society," says Salmond, "what law is to the state." "The national conscience may well be accepted by the courts as an authoritative guide; and of this conscience national custom is the external and visible sign."[1]

17. (4) *Through Private Agreement.*—The fourth main source of law is one the importance of which we laymen are apt to miss, because we think of it as part of our normal private existence—as something much more homely and familiar than that rather fearsome ogre, "the law of the land." The source to which I refer is

[1] P. 209.

the great mass of conventions and agreements which individuals voluntarily make with each other. These rules of behaviour, of give and take, are made by the wills of the parties concerned, mostly in accordance with what they feel to be expedient, reasonable, and just in the circumstances. And yet, unless there are serious reasons for doing differently, the courts will range the power of the state behind these agreements. Where tangible interests are at stake, the courts will compel performance on the part of the person who proposes to go back on his word. As we shall see in our next section, the general law of contract is designed to secure regularity in the fulfilment of private agreements, wherever this is possible without great hardship or injustice.

In the last few paragraphs I have been trying to show that the contents of morality and legality must to a great extent coincide, because our ideas of what is morally right and wrong are continually entering into the contents of the law. All Salmond's colleagues may not perhaps agree with him, but he at any rate is prepared to make the bold statement that the law is "a public declaration by the state of its intention to maintain by force those principles of right and wrong which have already a secure place in the moral consciousness of men."[1] It may be true that "law will always lag behind public opinion, and public opinion behind the truth,"[2] and hence that on many important points the law will embody rather the conscience of the past than that of the present; but even when this is the case (and it is not always the case), it will surely be possible to discover, by reflection upon the general principles and the history of law, the main ideas which have been slowly embodying themselves within it.

18. *Influence of Law on Moral Ideas.*—So far, we have been concerned with the effect of morals on law. Equally important is the fact that the law, as it exists at any given time, will tend to form a considerable part of the content of the individual moral consciousness. It is a commonplace amongst ethical writers that the individual derives his main stock of ethical ideas—the mental capital, so to speak, with which he begins the business of living—from the customs and institutions of the community into which he is born. Any original contribution which he may make in later life comes from his critical reflection upon this original content. One could quote many passages, especially from Idealist writers, in support of this contention. But we need not rely upon what the moral philosophers tell us; anyone who looks attentively at the facts can satisfy himself on the point.

19. *Conclusion.*—Taking all the foregoing considerations into account, we may, I think, accept the following conclusions: (1) Since,

[1] P. 427. [2] P. 47.

on the one hand, the laws and customs of the society into which a person is born greatly influence his ideas of what is morally right and wrong; and since, on the other hand, these laws and customs are themselves profoundly influenced by ideals of natural or moral justice; then the contents of our moral consciousness must coincide to a considerable extent with those of the legal system under which we live. Hence, if we wish to know what are the contents of the *common* moral consciousness, we shall find at least some of this content by studying the rules of law holding for a given community.

(2) Since law is professedly, and to a great extent actually, an instrument for the administration of justice, it is a most reasonable presumption that the formative principles which we find in law and custom are also the general principles which underlie common moral judgments; and—as I have already suggested—once we know what, in general, these principles are, the more elaborate study of the individual mind can be undertaken with greater profit.

In this paper I am concerned to discuss one fairly well defined question, namely, "What, in the view of the common moral consciousness, is the relation between duty and interest?" The data which I shall use in attempting to answer this question will be drawn mainly from Scots law; but I understand that the differences between this and other modern systems are very slight on matters of principle.

SECTION B. PROMISSORY AND CONTRACTUAL OBLIGATIONS

20. *Aim of this Section.*—One of the topics much discussed by moral philosophers is the duty (or, more strictly, the obligation) of promise-keeping. Both Kant and Ross regard this as an obligation of peculiar stringency; and I shall devote this section to an elucidation of the common view upon the subject in so far as the common view can be inferred from contemporary law. We shall be concerned here with the law of contract, a department of law which deals to some extent with unilateral promises and much more fully with mutual promises.

21. *Any promise presumably creates Obligation.*—To what extent is a promise a source of legal obligation? Scots law presumes an obligation to have been created whenever a promise has been made. This presumption is merely a general, initial presumption; and in particular cases it may be successfully challenged. Still, the onus of proof rests upon the person who asserts that his promise has not placed him under obligation. "The law recognizes as a general principle that an obligation may arise from mere consent—that if a man undertakes to do or pay something, or to abstain from some

course of action, he has incurred an obligation which may be enforced against him by some form of legal process."[1] Of course the courts will not occupy their attention with trivial disputes. For the law to take cognisance of an agreement, important interests must be involved. But wherever the agreement is one which the courts will take notice of, then they work on the principle that a promise, as such, is presumably binding. I should mention that, in Scots (as distinguished from English) law, a promise will create obligation even if there be no "consideration."[2]

22. *Obligations not eternal but created.*—A clear inference from the preceding paragraph is that some at least of our obligations are not eternal and unchangeable, but are created. I make this point because some moral philosophers are in the habit of talking as though no duties, obligations or rights are ever created by us, all of them existing antecedently, and requiring only that we recognize and accept them. The indisputable truth is that at least some are actually created by the wills of men.

23. *Why does Promise create Obligation?*—We must now raise the question: Why should my making a promise place me under an enforceable obligation to perform? The answer which has often commended itself to moralists is that the obligatoriness derives from the relation of the promise to the interests of persons. This suggestion seems to accord with legal practice. The law will take cognisance of matters where the assessing of profit and loss seems possible. If I promise to accompany my friend to a concert, and then decide that I do not want to go, the courts will not normally entertain an action by him. But if, in a fit of generosity, I promise him a hundred pounds, and if he can supply the appropriate proof of my promise, then the courts will entertain an action by him. In the first case there is not, and in the second there is, some chance of assessing gain and loss with regard to interests. Where this is possible, and where the interests are not too trivial, the courts will function. Special note should be taken of the distinction between trivial[3] and important promises. What does a "trivial promise" mean if it does not mean a promise relating to trivial interests? Does not all this suggest, then, that obligations derive their significance from the interests of persons?

24. *Meaning of "Promise."*—We shall find, on investigation, that this suggestion is true. It has, however, been stoutly repudiated. The obligation to keep a promise (it has been said) has nothing to do with the production of good or with conserving the interests of persons. Fulfilment (it is contended) is presumed to be obligatory simply and solely on the ground that a promise has been made.

[1] Gloag and Henderson, *Introduction to the Law of Scotland*, 1st edit., p. 33.
[2] *Op. cit.*, p. 33.
[3] See Ross, p. 19.

Now this last sentence seems to me to state precisely the principle on which the law proceeds. A promise is presumed to be binding in virtue of its being a promise. But it does not in the least follow from this that the obligation to promise-keeping has nothing to do with interests. In fact we shall find a reference to interest quite distinctly involved once we understand what "promise" means. To constitute a promise three things are necessary.

(1) It must be a statement (or an action with the significance of a statement) indicative of a volitional or conative attitude of mind in the person making it. But (2) not every such statement is a promise. The mere expression of a hope is not a promise. Nor is the expression of a mere intention. This is evident from the fact that, while a promise gives rise to an obligation, when "a party has only indicated an intention, he has incurred no liability. The announcement that I intend to do something does not bind me not to change my mind, and anyone who acts or incurs expense on the assumption that I will carry out my intention does so at his own risk."[1] To be a promise, therefore, a statement must be capable of reasonable interpretation according to the categorical form: "I *shall* give (you or A.B.) one hundred pounds." That is to say my "promise" must assert a settled disposition of my will in virtue of which a certain future event may be counted upon to happen. But this is not all; for (3) to speak or act in someone's presence in such a manner as to assert a settled disposition of my will lays me under no obligation to him unless I am aware that, counting upon my future behaviour, he is likely to act in anticipation of it. It must be clearly understood that the operative factor in making the categorical assertion a "promise" to a person is not that it is made in his presence. E.g., a witness to a contract or promise is, as such, a mere third party without any title to demand performance of the contract or promise. The operative factor is that, when making the statement, I know that it is heard or likely to be communicated to and counted upon by someone whose interests are involved. Thus if A, on the ground of his words or conduct, incurs liability to B through B's acting in view of A's statement, then "B must be either a person with whom A has actual relations, or a person whom A, as a reasonable man, is bound to regard as interested, not merely a member of the general public."[2] And, granted the knowledge of this interest, A's statement need not have been made to B himself. It is sufficient that A knew of the interest and of the likelihood of his statement being communicated to B. "Thus, a promise to give a subscription

[1] Gloag and Henderson, p. 36. Thus a "will," revocable at pleasure by the testator, is legally regarded as a statement of present intention, and not as an assertion of settled disposition.

[2] *Op. cit.*, p. 27.

to a charitable society may be enforced by the society, though not made to the society itself nor to anyone acting as agent for it."[1]

It seems clear, therefore, that a promise means a categorical assertion about the future behaviour of the person making it, the assertion being made in the knowledge that a particular person or group of persons is likely to act in anticipation of this behaviour in a manner affecting his or their interests.

The position, therefore, is this: A promise is presumed to be legally binding, in virtue of its being a promise, and for no other reason. But when we ask what a promise is, it becomes clear that "promise" cannot be defined except in relation to "interest." Hence to say that a promise, in virtue of its being a promise, imposes a presumptive obligation, is not inconsistent with (and actually demands) the further assertion, that the obligation derives its significance from the interests of a person or persons.

25. *Promises "Void" or "Voidable."*—So far, we have paid attention only to the general presumption that promises ought to be honoured. But this is merely a presumption, and there are circumstances in which the breaking of a promise may be permitted or even commanded. The consideration of these circumstances will throw a great deal of light upon the ideas which underlie the legal system. In what follows, I shall speak of "promises," "agreements" and "contracts" indifferently, for the same principles apply to all.

According to the law, some agreements are treated as utterly null and *void*; they are regarded as though they had never been made, and give rise to no rights or obligations. Some others are called *voidable*; i.e., they may be declared void under certain conditions.

There are four causes, any one of which will render an agreement void or voidable: (1) Lack of legal capacity to contract.[2] An example of such incapacity occurs in the case of a "pupil"—a boy under fourteen or a girl under twelve. Contracts made by pupils are void, for they cannot incur obligations by consent. The same holds with regard to lunatics. A minor (aged fourteen to twenty-one) may contract; but any contract made during his minority is voidable by him while he is under twenty-five. (2) Defect in form of agreement. Agreements for the sale of heritable property, and also testamentary bequests, must follow certain prescribed forms before they will be regarded as valid. (3) Consent may have been obtained in an irregular or mischievous manner.[3] Under this heading comes fraud; and even innocent misrepresentation may render a contract voidable. Agreements induced by violence or threats are generally void; and others may be reduced on the ground that they are "harsh

[2] Gloag and Henderson, p. 78.

[1] *Op. cit.*, chap. vi. [2] *Op. cit.*, chap. viii.

and unconscionable."[1] (4) The agreement may be illegal, or have an illegal purpose in view.[2]

26. *Why Void or Voidable?*—Since agreements are presumed to be legally binding, the courts must have some principle in view when they, from time to time, over-rule this presumption and declare that the presumed obligation is not really one. What is this principle?

One view which may be held is this: To keep a promise is a *prima facie* obligation which may, however, be superseded by the person's being confronted by a greater obligation; but, so long as no greater obligation arises, the *prima facie* obligation to keep the promise stands. On this view, when it is asked, "May I break my promise?" the test to be applied is, "Is there any greater obligation confronting me?"

Now this is certainly not the view adopted in law. There are, of course, situations in which the law would apply this test of "more and less stringent" obligations; but in many cases such an interpretation of its procedure would be patently false. For instance, where there is lack of legal capacity to contract, the nullity of a pupil's or lunatic's agreement is not inferred from some *other obligation* incumbent upon the pupil or lunatic. The assumption is, surely, that he is incapable of wise judgment, and that he is to be protected from consenting to his own serious disadvantage and to the frustration of the interest of those closely related to him. It is, apparently, with these same dangers in view that a minor, while able to make valid contracts, can ask for these contracts to be reduced, and is absolutely prohibited from disposing of his heritable property gratuitously.

The suggestion that agreements can be legitimately broken only in face of more pressing obligations is seen to be even less plausible when we turn to cases where avoidance of the contract is founded on the agreement's having been improperly or mischievously obtained. Suppose A agrees to buy article "a" from B, believing it (on B's representation) to be a valuable antique. Later he discovers that it is a fake, and that B was aware of this. A may legally break his agreement. He is not obliged to do so; but he may if he wishes. Now, surely, if his avoidance of the contract were founded upon there being a more stringent obligation, there would be an *obligation* to break it. Actually there is not; A may break the promise or fulfil it, in accordance with his conception of his own interest.

It will not do to reply: "There was no real promise made by A, since he was misled by B." The law draws a distinction between (*a*) fraud so great as to preclude any real agreement, and (*b*) fraud which, while inducing real agreement, renders that agreement void-

[1] Gloag and Henderson, p. 69. [2] *Op. cit.*, chap. ix.

able.[1] In the case we are supposing, A has agreed to buy article "a." He has made a real agreement—which, nevertheless, he may break —though he would not, perhaps, have made it but for fraudulent representations.

It is where agreements are illegal, or have an illegal purpose in view, that the notion of "prior" or "more stringent" obligation comes into operation. But even here it is quite obvious that the prior obligations are directed to the securing of personal interests. To illustrate this point two examples may be given—the rule against illegal restraint of trade,[2] and the rule that a man cannot, by a testamentary deed, defeat the claims of his wife and children upon his estate.[3] Numerous other examples can easily be found.[4]

Hence, we may conclude that, when the breaking of a promise is permitted or commanded by the law, the governing principle seems to be the care for personal interests.

27. *Contracts, though voidable, may yet be enforced.*—We may now take a further step in our survey of the law of contract. We began by considering the simplest question, "What is the attitude of the law to agreements in general?" and we saw that a promise is, in law, presumed to be binding. On analysis, it transpired that a promise is to be defined in relation to the interests of persons. We then turned our attention to a more complicated issue arising from the fact that promises may be legally broken; and, on considering the circumstances in which breach of promise is allowable, we seemed to find the notion of personal interests again exerting a controlling influence. We shall now attend to a still more complicated situation.

Some agreements are enforced even when they belong to the class of "voidables." "The fact that an obligation is voidable does not mean that in all circumstances it will be reduced."[5] Reduction may be refused, and the agreement enforced, by asserting the "double negative"—"This agreement is not not-binding upon you";—and here, again, we find that it is care for the interests of some person or persons which militates against reduction of the contract.[6] For instance, the person who claims that it is not binding is unable to restore the *status quo ante*;[7] or third party interests have become too deeply involved; or a person, after having become aware of his right to reduce, has actually behaved as though he accepted the contract as valid; or there has been unreasonable delay in taking steps for reduction.

The idea underlying the enforcement of (admittedly tainted)

[1] Gloag and Henderson, p. 57. See also Gibb's *Select Scots Cases* (1933 edition), pp. 31, 33, 35, and 114–15.

[2] Gloag and Henderson, pp. 74–5, and Gibb, p. 15.

[3] Gloag and Henderson, p. 448.

[4] *Op. cit.*, chap. ix.

[5] *Op. cit.*, p. 42.

[6] *Op. cit.*, chap. v.

[7] Gibb, pp. 35–6.

agreements in these cases is too obvious to need much argument on my part. Personal interests to which importance is attached will be served by the enforcement.

28. *Breach of Contract.*—The same idea reveals itself in the remedies which the courts prescribe for breach of contract. The Courts try to secure performance, or else compensation, for the injured party. But, even in their attempts to secure these things, their procedure recognizes that the interests to be taken into account do not all belong to the party bringing the action. The general rule is to insist on specific performance if this is desired and is possible,[1] but this will not be insisted upon in certain circumstances. For example, where the fulfilment of the contract would involve the parties in very close personal relationship—as in a promise of marriage—fulfilment will not be ordered if it is felt that "forced compliance would be worse than none."[2]

As an alternative to specific performance, the complainer may claim damages, withhold performance of the correlative promise made by him, or break off relations. The point I would make here is this: in a contract where mutual promises have been made, each promise is *prima facie* binding; but, when one of the promisers has broken faith, the other may also break his promise. This right of withholding clearly does not follow from some higher obligation—there is no *obligation* to withhold—but from the fact that the person's interests are in jeopardy.

29. *Extinction of Obligations.*—As obligations are created in various ways, so from various causes they cease to exist or are "extinguished." Of the various ways of extinguishing obligations, two are of special interest to the moral theorist. (1) A's obligation to B may be extinguished by B's renunciation of his claim. Now here is a question to which I invite the attention of some contemporary moral philosophers: If A's obligation to B has no essential relation to B's interests, how can B *destroy* or extinguish A's obligation by the mere fact of renouncing, of his own free choice, certain of his interests? (2) Obligations may be extinguished by "compensation," i.e., by the setting off of debts or obligations against each other. It is very difficult to see how obligations can be met by this method of compensation, if they have any sanctity or significance apart from their relations to rights and interests. Suppose A promises to pay B £100, and B promises to pay A £20; then, on the method of compensation, *both* obligations will be fulfilled by *neither* person doing what he has promised to do, but by A doing something quite different, namely, paying to B £80. Or, to take another case: A buys a piece of furniture from B for which he agrees to pay £10 at a future date. Before the payment falls due, B promises A £10

[1] Gloag and Henderson, p. 102. [2] *Op. cit.*, p. 102.

as a wedding present. Both obligations will be met by neither person doing what he has promised to do. The use of the method of compensation makes possible the complex commercial activity of the modern world. It is a vicious method—on the assumption that a promise is something significant and obligatory apart from its relation to the interests of persons. It is a sensible and efficient method, on the view of promise-keeping which I seem to find implied in the general principles of the law of contract.

30. *Conclusion.*—In this section I have tried to establish one broad general thesis: that, in the building up of the main provisions of the law of contract, at least one regulative idea has been operative, namely, concern for the interests of persons. So far as I am able to judge, this is *the* regulative idea, for I have detected no other one which is of any consequence for moralists.

31. *Interests and Rights.*—I propose now to broaden the scope of the enquiry and to ask whether our conclusion respecting promissory and contractual obligations applies to all legal duties or obligations. This may seem to be a task much too detailed for a comparatively short article, but fortunately the discussion of detail can be reduced to small proportions. Study of the contents of any legal system will reveal the operation of certain general principles, and I shall confine myself to the elucidation and illustration of these principles.

The proper approach to our problem is, I think, indicated by the fact that, while we have traced a connection between promissory obligations and *interests*, lawyers are accustomed to speak of such obligations as related to *rights*. Some writers[1] on jurisprudence define rights as "legally recognized and protected interests" and speak of duties and obligations as correlative to rights. It seems to me, therefore, that the most fruitful line of enquiry will be to begin by examining the nature of rights and their relation to interests.

[1] E.g., Salmond, para. 37.

(To be continued)

REMARKS ON THE PHILOSOPHICAL STATUS OF PHYSICS

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Recent results in kinematics, obtained by myself and those working with me, have convinced me that the philosophical status of physics, as it has come down to us from Renaissance days, requires reconsideration. The reason can be stated in a couple of sentences: it has been found possible to establish certain laws of physics—laws of motion, the law of gravitation, the laws known under the name of the Lorentz transformation, and some others—purely deductively, without specific assumptions, and without empirical appeals save only to the empirical awareness of something we call "the passage of time." Yet physicists have claimed *ad nauseam* that the ultimate sanction for "laws of nature" is observation and experiment, that this is what distinguishes physics from other branches of exact inquiry. The contrast in these two conceptions of natural law needs no emphasis. It is the purpose of this article to attempt to clarify this confused situation.

That an empirical appeal to the existence of a before-and-after relation between events in each observer's consciousness is necessary at the outset is clear when we reflect that without such an appeal it is impossible to say what we mean by *motion*. An essential difference between a theorem of kinematics and a theorem of geometry is that the former involves mention of temporal changes, and so at some point the element of "time passing" must be introduced into the analysis. We can go on proving theorems in geometry *ad libitum* without encroaching on the traditional domain of physics; to take the step which may lead to the conquest of physics by logical analysis it is necessary to pass from static theorems to theorems about motion. And the claim that is made in this article is that kinematical analysis is no mere elongation of the province of geometry (as "general" relativity was), but involves an essentially different logical process which actually proves that certain particles in motion must behave in such and such ways and no other, and so tells one results which have previously been known to us only through experience.

There are perhaps some other very basic appeals in the kinematic analysis, for example, to the existence of *three* spatial dimensions. But the appeal to the temporal awareness of the observer, with what other appeals may be found to have been made, are essentially

different from appeals to experience made with the object of discovering, formulating, or verifying the so-called laws of nature. These latter appeals rest on applications of the Principle of Induction. In principle this means that they are based on the cataloguing of instances. We see at once that our beliefs in the existence of a before-and-after relation, or in the "three-ness" of spatial dimensions, do not rest on the cataloguing of instances; either we may regard them as intuitions, or, better, as axiomatic definitions of what we mean by "time" and "spatial dimensions" respectively. They are the minimum descriptions which serve to say what we are talking about. In the case of a law of physics based on appeal to experience it is supposed that the observer is already acquainted with his material to a certain extent, but is appealing to experience to widen that extent. Often he is appealing to experience to turn a qualitative relation into a quantitative one, and then his precise formulation of the quantitative aspect constitutes the "law of nature" founded on experience. The "law of nature" deduced by kinematic methods is of quite a different kind.

For one thing, no quantitative appeals to experience go to its make-up. It may be objected that physics is already acquainted with exact quantitative laws based on merely qualitative appeals to experience. For example, it might be thought that kinematics resembles thermodynamics, in which the statement of an impossibility, i.e. a qualitative, empirical statement equivalent to an inequality, serves as a starting-point for the derivation of quantitative rules for the behaviour of matter in bulk. But it may be pointed out: (1) that only one of the "laws" of thermodynamics is thus qualitative (the Second Law), the First being a quantitative statement (an equality, not an inequality); (2) that Thermodynamics assumes a great many concepts—laws (of dynamics), modes of measurement (of work and energy)—based already on the empirical appeals of traditional physics. In short, Thermodynamics is not a *primitive* branch of physics, and makes no claims to clarify the elements on which physics reposes. So far from being independent of experience, the generality of thermodynamics arises from its summarizing vast tracts of experience under deceptively simple statements.

Nor must the content of the results of the kinematic method be confused with the similar content which was at one time thought to be included in "General Relativity." The high hopes which were at one time entertained that general relativity would throw great insight into the logical structure of physics have scarcely been justified in the event. General relativity, in the hands of its founder and its severer exponents, has on the contrary always claimed to be based on experience; such supposedly empirical facts as "the con-

stancy of the velocity of light," "the equivalence of gravitational and inertial mass," the numerical value and indeed algebraic sign of the "constant" of gravitation—all these play a fundamental part in the development of the theory. Further, in this theory, the law of gravitation is not actually deduced, but is assumed, in a certain geometrical guise. General relativity has partly concealed this its empirical foundation by the manner of its own technique; which is, to build up geometrical entities, assume a correspondence between these geometrical entities on the one hand and certain kinematical and dynamical entities known empirically on the other hand, and then use the geometrical relations, derived as holding between the geometrical entities, to establish similar relations between the physical entities. This process has been described as the "geometrization of physics"; it makes a new, four-dimensional picture of what is supposed to be physical reality, and then identifies the rules of perspective of the geometrical picture with the "laws of nature" obtaining between the physical entities. Clearly this process throws little light on the origin or meaning of "laws of nature." For it fails to produce any compelling reason for the original identifications made. Logically the procedure is an empty one; the static four-dimensional picture it erects does not exhibit the essential natural fact of the change of the world in time; it cannot do this because it has not begun with the observer's before-and-after relation, as kinematics does, but begins with physicists' clocks which could just as well move backwards as forwards. General relativity gives no logical definition of a clock, nor does it specify any identifiable measure of time, so that the physicists' "uniform time" is still as it were "in the air," unanchored. True, general relativity *points* to a physicist's clock; but no logical analysis can begin by an act of pointing. We require operational definitions, not definitions by enumeration.

Kinematic analysis aims at being much more primitive. And to make clear what I mean by this, I propose briefly to compare arithmetic, geometry, and physics in this aspect.

The primitive elements in arithmetic are numbers. The exponent of "common-sense methods" knows what a number is, and can perform complicated operations with numbers without having to bother about a logical definition of a number; he can, for example, test whether a number is prime or not. But when he comes to need a philosophy of number, he finds that he must replace his intuitive acquaintance with numbers by precise definitions. If he is not philosophizing about numbers, his ordinary workaday notions suffice. When he is so philosophizing, the entities he constructs, whether constructed (with Peano) out of the notions of unit and successor, etc., or whether constructed (with Russell and Whitehead)

out of notions of classes of objects, or whether (leaving integers) constructed as irrationals by Dedekind sections, bear little resemblance to the corresponding "numbers" with which he was intuitively acquainted. *The entities under consideration change their status under the needs of logical analysis.* They are the same things, differently known. If they were not the same thing at bottom, the logical analysis would have not achieved its object; but they are differently introduced. The extent to which pre-existing actual experience has controlled the formulation of the logical definitions is rather a matter for the psychologist than the metaphysician. But once the logical definition has been attained, the empirical experience may be regarded as scaffolding to be discarded. In this sense, arithmetic becomes an exact science whose laws have a sanction independent of experience; for they cannot be reinforced by any cataloguing of instances, however extensive. For the moment, however, we are concerned not with the derived laws but with the definitions serving as starting-points for the derivations.

The geometer has long recognized that *his* primitive entities change their status under the demands of logical analysis. *His* primitive entities are things like point, line, and plane. Just as a number is an abstraction, so is a point, but a child has no difficulty in forming a working mental image of a point. A point (to him) is something very small, a plane something very thin and very flat. Euclid attempted to frame "definitions" of these entities based on appeals to such intuitive notions. But geometers soon found out that Euclid's definitions were useless when they wished to put their subject on an axiomatic basis. It appeared that Euclid never in fact appealed later to those properties which he had initially isolated, so that his definition might just as well not have been made. Quite other "properties" were needed as definitions. The axiomatic geometer does not now try to define his entities "point," "line," etc., save by permitting their occurrence in certain relations called axioms, which form his starting-point and are in effect *operational* definitions: something to which appeal may later be made when we wish to recognize whether a proposed entity is indeed a "point," etc., or not. We see again that under the stress of logical analysis, the definitions of the primitive entities change their status, though the entities themselves are at bottom the same entities. One can understand geometrical theorems, even discover them for one's self, either empirically or deductively, without constantly using or indeed being aware of the axiomatic definitions of the primitive elements, but, for all that, the logical definitions are necessary to ascertain the logical structure of the field of inquiry.

These points are elementary as applied to arithmetic and geometry, but they have not been realized by physicists. The primitive entities

of physics are things like clocks and metre scales and standard weights. Considerable acquaintance with physics can be gained without inquiring too closely into what we mean by clocks and scales; it is sufficient to have an intuitive grasp of what we mean by them, or some degree of experience of them. Yet we must expect that, in order to give physics a philosophy, that is, in order to investigate the extent to which it is based on experience or is a purely logical structure, we may need to introduce its primitive entities to analysis in some quite new way. Though bearing the same names, and being in fact the same *things*, the entities of physics may have to appear initially in quite different guise.

The standard metre is of no particular interest in itself. Its importance lies in the attempts to use it to say what we mean by the *distance* between two points. Or, to put it another way, if we assign some *number* as the distance between two points here, how can we fix two points in another neighbourhood as having the *same* distance? It is well known that we cannot answer this question by moving the standard metre itself. Not only can we not be sure that it has not changed in the process of transport, but we cannot even say what we would wish to mean by its not having changed; for there is no other standard of comparison available. It is no good saying (with Eddington) that we could reproduce the standard metre in Mars by telling a Martian how many atoms of platinum to take; even from the practical point of view he would have to know how to measure and reproduce temperatures and pressures, and control the elastic history of his bar. But the practical point of view is here irrelevant. We should want to know that all atoms of platinum had the same diameter, and we should have no means of saying what we meant by this until we had properly defined our macroscopic standard of length in different places. It would in any case be absurd to suppose that a fundamental quantitative aspect of physics, namely, its power to define equal lengths, rested on the atomic nature of matter; a philosophy of length should be independent of the micro-structure of matter. The contrary would be equivalent to saying that God can set up congruent standards of length—the mass-produced atoms of the nineteenth century—but that Man cannot say what he means by God having done it. Even the "uncertainty" of length measures of atomic and sub-atomic entities, envisaged by the quantum theory, has no meaning until length itself has been defined.

We have in fact to frame a quite other definition of length than any definition supposed to originate out of the indefinable notion of the transport of rigid bodies, or of the reproduction of the standard metre in terms of multitudes of indefinably similar atoms. This is not the place to go into technical details. It suffices to say that by

kinematical methods it can be shown that the observations of "clocks" which serve to fix the epoch of an event not close by us serve also to fix a measure of the "apartness" of the event from us. Without any assumption about the speed of light, we can link the definition of a measure of length with the definition of an epoch of time relative to an appropriate clock. The question then hinges on the setting up of congruent standards of time at different places. The ultimate identification of the standard of length-measure so derived depends on the identification of the standard of time so set up. For the moment we will just state that in spite of the difficulty of capturing the flying, irretrievably passing instant, it is found possible to assign a meaning to saying that two intervals of time, in the experiences of different, mutually distant observers, possibly in relative motion, are under certain circumstances equal to one another. The problem then remains of saying what we mean by asking whether two distinct intervals of time, at different "times," in the experience of the *same* observer, are equal. With this problem we embark on the long quest for the meaning of "uniform time," to which we shall return in a moment. Meanwhile we must bear in mind that, as said above, we are not, by this our logical analysis, changing the elementary entities of physics; we are only altering the stage entrance from which they make their bow to the philosopher.

If, under the gentle massage of philosophy, the entities of physics change their status, though remaining essentially the same *things*, how much more may we expect the *laws* of physics to change their status! Again,we may profitably begin by noticing what has happened in two other exact sciences, arithmetic and geometry.

The theory of numbers, which Professor G. H. Hardy has recently lauded as the most austere of realms of investigation, is essentially a primitive subject. Its theorems or laws have gone apparently deeper because the subject-matter of number is nearer the surface of reality than that of geometry or motion. There is a sense in which it may be said that the earliest of the theorems about *motion* dig deeper into reality than the whole subject of number, for, as remarked earlier, they involve a prior analysis of that passage-of-time which is an essential aspect of the way reality presents itself for our apprehension. Now the theorems or laws of the theory of numbers can be investigated either empirically or deductively. One can experiment (with tables of prime numbers, factor tables, etc.); or one can investigate the same questions with the aid of algebra or the theory of functions. It happens to be intellectually easier to investigate the theory of numbers experimentally than to investigate it deductively, but that is not here the point. A regularity arrived at deductively is called a theorem. Such a regularity, when discovered experimen-

tally, is in this domain called a "conjecture" or a "hypothesis." Nevertheless, any example of the latter is precisely of the same character as the "routine" (to use Karl Pearson's word) which in physics is called a "law of nature." The mathematician, in using the words "conjecture" or "hypothesis," emphasizes the lack of sanction behind the routine when that routine is an experimentally-discovered arithmetical regularity; he feels its insecurity. The physicist *exalts* his similarly-discovered routine in a different field of phenomena by calling it a "law of nature," concealing by this term his reliance on some nebulous application of a Principle of Induction, and minimizing the lack of sanction behind it. But these names are but value-judgments. Essentially the experimentally verified "conjecture" of the theory of numbers and the experimentally verified law of nature of the physicist have the same status.

In the case of the theory of numbers, however, this status of a "conjecture" does not usually persist unchanged. In the theory of numbers a great many theorems have been "discovered" experimentally, and subsequently either confirmed or disproved by logical processes. Some even await this step still. Probably, as time goes on, the rôle of empirical discovery in the realm of the theory of numbers will diminish, but it is possible that, outstrip it as it may at most points, "theory" (i.e. deduction) will never catch up with empirical discovery at all points.

There is thus no ground for the claim that in some way the theory of numbers is "superior" to the other "exact" sciences, as soon as we admit the possibility of a similar change of status in other empirically-discovered laws. The importance of the theory of numbers is other: it shows how an originally empirical field of experience may be cultivated deductively; it may be considered as a garden or outer court to that great palace of the deductive sciences that may ultimately come into being. When Kronecker made the oft-quoted statement that "God made the integers," he was acknowledging that numbers form a mode of ultimate reality. But he did not mean to imply that God could play ducks and drakes with the integers, or determine arbitrarily which are prime and which composite. He was merely saying about certain abstractions which are forms of reality what can be said about other abstractions which are forms of reality—about geometrical entities, for example—spheres and cubes. They too are forms of reality whose laws are not arbitrary.

This question therefore has always posed itself to the physicist: are the laws of physics arbitrary? The answer to this question puts him in a dilemma. If he admits they may be arbitrary, he is unable to show why they should be exact, or simple, or invariably hold good; but if he admits they are not wholly arbitrary, they must be,

at least in part, deductive, and that part cannot rest on experiment any more than deductive theorems in arithmetic or geometry. In the case of these last, we are accustomed to take the laws as exactly determined and determinate, and only to debate whether any shred of the empirical remains about either. In the case of physics the boot is on the other leg. Since Renaissance days, men have been accustomed to take the empirical, experimental side of physics for granted and to question whether the fundamental laws can be reached by deduction at all. It is admitted that the secondary laws are deductive consequences of the fundamental ones, but the sanction behind the whole structure is claimed to be quantitative experience. But once it is shown (if it can be shown) that some laws of physics, previously based on experiment, are of the nature of theorems, the whole status of physics changes. It can no longer be held to differ essentially from arithmetic and geometry; only its field of study, its relevant branch of reality, are different. Like them, it may for long continue to contain theorems not yet accessible by deductive methods, but that would be only because the right mode of approach had not been discovered. Even when the right mode of approach is found, the laws may not, as theorems, emerge in precisely the form in which they were experimentally discovered. But they will be the same laws.

This is perhaps the place to combat the view that whilst in arithmetic a logical derivation enhances the status of a "conjecture," in physics a logical derivation would depreciate the status of a "law of nature." It is sometimes thought that to an all-powerful brain, a distant theorem which we derive by a complicated train of argument from a given set of axioms should be self-evident. "The verbosity of mathematics is testimony to man's stupidity, for the deductions that can be made logically from any set of axioms should be self-evident to any sufficiently acute mind."[1] As well say that the complications of modern experimental atomic technique—the dance of the atoms—would be self-evident to any sufficiently powerful eye! That is to miss the point. The point is that whether the truth of the distant theorem is apprehended immediately or not, in order that it shall have a "truth" it must be linked to its set of axioms by an intervening set of propositions resting on appeals to their axioms and capable of commanding assent or denial. The linkage must exist. The truth of the theorem is an aggregate composed of the assertion made by the theorem together with the intervening linkages. Thus a distant theorem, contrary to what is often thought, is no mere tautology, with a content precisely equal to that of the original axioms. For the linkage with the axioms has to be discovered; skill and art go to its construction and arrange-

[1] J. R. Synge, *American Math. Monthly*, March 1939.

ment; and the content of a theorem exceeds the content of the basic axioms precisely by this linkage. When a theorem is *proved* for the first time, something new is discovered, even if the bare assertion contained in the enunciation of the theorem was previously known. A theorem, and therefore a law of nature proved deductively, are thus richer than the original axioms; and the status of a law of nature is enhanced, not diminished, by being arrived at deductively.

Let us now consider how kinematics sets about establishing an empirical law of nature deductively. As the height we wish to climb is appreciable, it may be expected that the ascent may be devious.

The simplest of the general laws of nature is perhaps Newton's first Law of Motion, which may be taken either to be based on direct observation or to be an outright assumption which harmonizes a large number of direct observations. Can we find, once we have set up units of length and time, in what way a free particle will move? And will the law so derived, if it can be derived at all, agree with the observed law?

The manner in which it has been found possible to derive the behaviour of a free particle involves technicalities unsuitable for this article, but it may be described roughly in the following way. It must first be repeated that the so-called proof of this law given by "general relativity" is no proof at all. It is not sufficient to say that the path of a free particle is a geodesic in "space-time," first because the kind of time involved is not specified, secondly because free paths are not always geodesics. To make a start with this quite deep problem we may profitably consider how sophisticated theorems in geometry arise.

In the geometry of plane figures, we need a plane surface on which to construct them: we need a *background*. Similarly, to ascertain the motion of a free particle, we need a background—of idealized observers. These observers need to be provided with the fundamental measuring instrument, the clock, and these clocks need to be synchronized and rated against one another. Systems of such synchronized and rated clocks can be defined and operationally constructed. I have called such a system "an equivalence." An equivalence is a motion-type, and its pairs of members may be in relatively accelerated motion; in fact the relative motion of any one pair may be fixed arbitrarily. For synchronization it is in general necessary for the two clocks concerned to come into juxtaposition at some moment of their careers; and if two members of an equivalence thus coincide at some moment, it can be shown that all do so at the same moment. More specialized than the equivalence is an equivalence in which regard is paid to its density-distribution, and simplest amongst these is the one I have called a "substratum." In this, to

each member of the system the others appear symmetrically disposed, and receding outwards with a velocity proportional to distance. The specification of this system involves no "constants" whatever save such as can be fixed conventionally—just like a plane. And like a plane, the system has no boundary accessible to any member of it; and even to an external intelligence it has no size until an observer and an epoch in his experience are specified. It is a certain set of points in motion. It was originally discovered as a model of the receding nebulae which constitute the universe. But we have no need to identify it with the universe at this stage; it is an abstract kinematic entity, capable of discussion in its own right, like a plane or a linear complex of lines in geometry. It need not be thought of as *large*—as already remarked it has no size, only a combination of size and age. It is something that is for ever unfolding. It is an embodiment in kinematic terms of *le devenir*. It evolves. It is because this feature has been embedded into its definition that consideration of its properties allows us to go beyond conventional relativity. It is, it is true, an idealization, just as a plane is an idealization, but it serves as the threshold of an advance just because it incorporates an aspect of reality that eluded relativity. Its state cannot be described "at a moment," unlike the physical systems of our local experience. Though I have described it as a set of points in motion, it must not be thought of as a collection of co-ordinates which are functions of a parameter "the time." For "the time" is different for each member of the system. If it involved just the addition of a fourth dimension—a time-dimension—to the existing study of three-dimensional sets of points, no progress would have been achieved; we should be studying a set of curves in four dimensions (as relativity does) instead of points in three. Actually we are studying a set of points in three dimensions which can only be thought of kinematically.

A substratum is specified *kinematically*. The question at once arises: is it also a natural dynamical system? That is to say, will it, if left to itself, continue to be a substratum? Will it obey of itself the kinematic prescription which specifies it? This question can only be answered by an indirect method, which leads us eventually to the answer to the more ambitious question we asked earlier. Let all the particles (given to constitute members of the substratum) be *constrained* to move as specified, in their kinematically prescribed paths; and let an additional particle be liberated anywhere in the substratum, with any given velocity at any given moment as measured by any given observer. How will this particle move? Can we calculate its acceleration relative to this same given observer? The law of its motion will be simply such correlation as we can find between its acceleration and its velocity, position, and epoch.

If we can ascertain any degree of such correlation, we can at once find out something further about the motions of free particles in the presence of the system. For if we know something of the motion of P relative to O, and we take another observer O′ and another free particle P′ bearing the same relation to O′ as P did to O, then the degree of correlation we have found between P's acceleration and its velocity, etc., will tell us something of P″s acceleration as observable by O′. For O and O′ are as equivalent as two points in a patternless plane. But from a knowledge of O″s position and velocity relative to O, we can now calculate something about P″s acceleration relative to O. This must be an instance of the general correlation already found between the acceleration of *any* P and its velocity, etc. We thus get a condition which our correlation must satisfy. When we come to embody this correlation in mathematical terms, we find that we have actually determined part of the sought-for correlation. We have partly determined the law of P's motion from the inner properties of the background of observers.

To complete the determination, more difficult arguments are required. The substratum is not the only system of moving particles that can be defined such that each member stands in the same relation to all the rest. In geometry, as already remarked, the plane is patternless—structureless. It remains a plane even when filled with a pattern. But when we take our substratum, and add to it interlacing systems of other moving points which preserve its property of each original member's self-centricity, it does not remain a substratum; the nature of the correlation between the acceleration of a free particle and its velocity, position, and epoch, is altered. There is a vast variety of other patterns of moving points that can be superposed, and each has its own form of this correlation. Now the *degree* of the correlation we have already found for a substratum persists for the more complicated systems, but it contains an undetermined function which depends on the pattern-variety. We soon find, on examination, that an additional form of correlation comes to light, namely, one between this undetermined function and the population-distribution of the pattern-entwined substratum. Eventually we can perform the mathematical equivalent of removing the superposed pattern, and get back to a bare substratum, and we then find that we have attained our goal—we are left with a form of correlation so definite that the motion of the free particle with which we started is now fully prescribed.

Incidentally the result establishes that a substratum is a dynamical as well as a kinematic entity: a free particle, liberated in the neighbourhood of, and with the velocity of, any given particle a member of the substratum, does not tend to part company from that member, and thus the prescribed motion of the member coincides with that

of a free particle. The member behaves as if free. This proves that a substratum, once started, will go on of itself.

We have now established a *kinematic theorem.* We have used methods, not purely geometrical, embodying that feature of the external world which as perceived by us as observers we call the passage of time: methods which are in essence a growth out of the special theory of relativity, but which go beyond that theory. I call these methods *kinematic.* The method, and the result, are new to physics. Much of the difficulty which physicists find in accepting the new results is not difficulty over details, but difficulty over the very boldness of the attempt to do what the physicist is disposed to call "getting something for nothing." The attempt proves successful. We do indeed get "something," not in return for nothing, but in return for a logical analysis of the forms of possibility of motion and their dependence on the observers who alone can record them.

This kinematic theorem is of the nature of a theorem in the theory of numbers or in the realm of geometry, discerned deductively. Clearly experience has played no part in establishing the law, first because we have no experience of that abstract entity, the substratum, to guide us, secondly because when the theorem has been discovered it seems at first sight to contradict our experience of the external world in that the motion it prescribes for a free particle is different from Newton's.

The motion of a free particle may be considered in the same sense as a *figure* in the statement of a geometrical theorem. The equation of motion of a free particle is a relation between the figure and the plane, between the free particle and the background which is the substratum. It would be surprising if this relation could not be ascertained by sufficiently powerful analysis—by sufficiently hard logical pressure—just as surprising as if there should exist geometrical or arithmetical theorems which could not be proved. Such *may* exist; but that is no reason why we should not make the attempt to prove them, or why the attempt should be viewed with disfavour. A kinematic theorem is an inner relation between the different kinematic properties of a kinematic structure. The existence of such is interesting, for hitherto it has been believed that a law of motion is an empirical proposition, based on experience and inaccessible deductively. That even one such law has been attained deductively threatens much of the empiricist's position.

I have mentioned that this law of motion we have arrived at appears to disagree with the Newtonian law. But it possesses the amazing and unexpected property that if we re-graduate all the individual observer's clocks in a suitable fashion, and alter all derived measures like lengths in the way implied by this re-graduation, the law of motion transforms itself into the law of constancy

of velocity. We did not arrange for this, and at no intermediate stage of the whole argument did such a result look imminent. In the course of the re-graduation of clocks, the substratum itself changes its description: from being an outwardly receding set of moving particles, arranged with a certain density-distribution, it becomes a homogeneous, relatively stationary set of particles, with an absolute simultaneity holding between all its members. The inaccessibility of its boundary to any member of it, previously arising from the greater speeding-up at great distances, remains in the form that the extent of the now relatively stationary set of particles remains infinite. It is remarkable that the very re-graduation which transforms the law of motion into the Newtonian law of motion, at the same time transforms the framework or background into something very like a Newtonian framework or background. But there is one essential new feature emerging in this re-graduation: to carry it out, one has to mention a conventional constant of the nature of a time, which plays the part of the "age" of the system, as reckoned locally, measured from the epoch of coincidence of all the members. This is a technical point of which the full implications have not been yet worked out. I mention it in order to forestall a question which may have occurred to the reader: why did we not begin with a Newtonian framework? The answer is that owing to the essential presence of this unsuspected constant in all Newtonian foundations of relations, the argumentation would in that case be much more difficult. The *moving* substratum is comparatively simple to discuss just because its description contains no such constants.

This is one of the by-products of the establishment of a deductive kinematic theorem—the nature of constants which replace the constants of nature of the empiricist. Other by-products arise. For example, the deduction of the main theorem was originally carried out using the empirically formulated "Lorentz formulae" of relativity. When it became clear that genuinely kinematic theorems of a novel nature were emerging, it became necessary to ascertain what, if any, was the true physical content of the Lorentz formulae. They were originally derived as leaving the equations of electromagnetism unaltered in form on passing to frames in uniform relative motion, and they were later more fundamentally derived by Einstein on the basis of the assumed constancy of the velocity of light. But when a sufficiently powerful deductive procedure was employed, it appeared that this empirical postulate was wholly unnecessary, and thus that the *physical* content of the Lorentz formulae is precisely zero. This does not mean that they are tautologies. They have a definite logical content, and they assert something unknown to the analyst before he commences operations. But they depend on no *physical* fact, contrary to what used to be thought; they cannot help being true,

in the context for which they are derived. This frees the deduction of the equation of motion of a free particle from all empirical elements.

This by no means makes observation superfluous. Once we know that a substratum is a possible self-continuing form of a system of particles, it is possible to ask whether the system of the universe itself is on the whole a substratum. The *observed* fact that the empirically formulated Newtonian law of motion is coincident with one of the forms of this law as *deduced* for a substratum is strong evidence for the identification. I say "one of the forms of this law," because the precise form depends, as follows from what has been said above, on the form of the scale of time adopted; and the identification of the system of the universe with a substratum then identifies the scale of time habitually used in dynamics as that according to which the matter of the universe is on the whole at relative rest. This is ultimately found to mean that the time-variable used in dynamics is the logarithm of the time-variable used in the Lorentz formulae and in certain contexts in atomic physics, such as that used in determining velocities from the apparent Doppler shift in the lines of the spectrum of a distant atom. By ordinary clocks, based on dynamics, atomic frequencies must be supposed to speed up as time advances.

Again, another by-product arises in that, in establishing the law of motion of a free particle kinematically, a relation is found between the acceleration of the free particle and the population of the system in whose presence the particle moves. Such a relation we usually describe as "gravitational"; and it proves to be possible to derive from it the gravitational "effect" of a single free massive particle. (I say "massive" because the apparently non-kinematical notion of mass forces itself kinematically into the analysis at this point.) The law describing the effect proves to be the inverse square law of Newton, which thus appears expressed in Lorentz-invariant form. The difficulties previously found in physics in reconciling the Newtonian inverse square law with the Lorentz transformation were connected with the failure to recognize that the scale of time appropriate to the statement of the Lorentz transformation is that in which the substratum is an expanding system, whilst the scale of time appropriate to the simple inverse-square law is that in which the substratum is described as a relatively stationary system. Further, through the kinematic emergence of gravitation, we have a kinematic approach to *force*, and we find it possible to derive (in the case of gravitation) the third Newtonian law, of the equality of action and reaction. It may be mentioned that in this development the "constant" of gravitation—in general relativity an irresoluble one—appears as a combination of the conventional numbers we use to fix the three fundamental measures of (1) the speed of light,

(2) the age of the universe, (3) a mass equal to the "apparent mass" of the universe.

It will be seen that the quest for the establishment of the simplest of *physical* laws by kinematic methods opens up a wide tract of territory. It is immensely interesting that the scales of time, the law of gravitation, the definition of force, the equality of action and reaction, the constancy of the speed of light, the Lorentz laws—all become connected with one another and with the structure of the universe in the course of our search for a derivation of the law of motion of a free particle. It appears that the Newtonian scheme, even when refined by the operations of relativistic methods, is at no point arbitrary. No hard "brute fact" cuts in that could have been otherwise. Moreover, at no point is there any purely *physical* content to any of the laws derived; there is no irrational element in them inaccessible to deductive attack.

The physical reality of the external worlds of number, geometrical entities, and material particles we do not deny. But the laws governing them are neither at man's disposal nor at God's. In exploring the kinematic basis of "physical" law we are investigating the very avenues and bounds of possibility—the limitations of the act of creation. We can assert that in a three-dimensional universe of observers each conscious of the passage of time, the laws in question, *for a particular choice of the mode of measuring time*, must take the forms stated. The particular choice made is identified by the comparison between the observed and deduced forms of the laws. The "theorems" coincide with the "laws" only when this choice is so made. *Why* man has made this particular choice is a historical question; he was influenced in his choice by the desire to make laws as far as possible *simple*—as has often been pointed out before. Man could control the extent of this simplicity by his choice of the scale of time. Once this is fixed, the forms of the laws appear determinate. The towering genius of Newton stands out the more clearly in the insight by which he picked out not only a simple scheme of laws but a logically self-consistent scheme, a scheme capable of that development which the increasing resources of astronomy and physics could so smoothly guide. The modifications which are found to be necessary to make the Newtonian scheme strictly deductive—such as the introduction into that scheme of a number to represent the age of the universe—can be incorporated without maladjustment.

With regard, finally, to the kinematic method of approach to these questions, it may be objected that a particle has all kinds of attributes besides position and velocity, which alone, at any mentioned epoch in its kinematic history, are taken into account in the kinematic development. The reply is that the number "three," for example, cannot be *realized* without adding something to it, such as

the concept "orange" or "apple." Neither can the concept "point" be realized. This does not detract from the validity of the theorems established by analysts and geometers about numbers and points. The world of kinematics is a world of structure, like a Gothic cathedral with its columns, tracery, and buttresses. But it leaves plenty of room for the superposition of those elements which, like stained glass, are not part of the designed structure but give it variety, colour, and individuality.

THE GOOD AS MEANS AND AS END

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I

THE various discussions on morals which have recently appeared in the pages of this journal, like most modern discussions of the subject, have had to concern themselves with two antitheses, between the good and the right, and between duty and interest. As to the first, is the good what it is because it is right, or is right what it is because it is good? Or may the two be distinct, so that what is right is not necessarily good? And if it is not good, is it bad? Or do the right and the good overlap? For the second, the antithesis between duty and interest—"of course," says one, "the two have nothing to do with one another; the more carefully we keep them apart, the better." In rare instances, indeed, it will be allowed that my duty may coincide with my interest; but when it does so, it is felt to be shorn of half its worth. If it pays me to tell the truth, what thank have I for all my veracity?

Again, duty is properly what we owe; *debitum*. To whom do we owe it, and how and when was the debt contracted? Interest, on the other hand, is presumably that which makes a difference to us; which will increase our satisfaction or sense of well-being. Is it then to be followed, or shall we for that very reason suspect it or put it on one side? Or is it not really the fact that to neglect our own interest or what we conceive to be our interest, or to treat it as if it did not matter to us, is psychologically impossible?

If it should be said in reply, either that it is, or it is not, right to pursue our interest, further questions arise. Right is doubtless that which is according to rule. But whose rule? Our own, or one which is laid down for us, and independently of us? If so, when was it laid down, and whose authority can it claim? But when we come to deal with the term good, we are in still more peril from confusion. For there are three terms which are constantly changing places; good, the good, and goodness. And since the term good is habitually used both for means and end in human life, we are as constantly liable to find ourselves discussing the one when we fancy that we are discussing the other, or even explaining the good, the means, as that which leads to good, the end. Etymology, often useful, is here a broken reed. Yet we cannot get rid of the word. As a predicate, the word good, or its opposite, bad, attaches itself to every possible

subject of discourse; and when, as the fundamental tenet of all religion that has freed itself from the clutches of superstition, we say that God is good, it would certainly seem advisable to be able to give some meaning to the formidable and elusive adjective.

Formidable and elusive? Is it not rather an accommodating maid of all work? Observe the variety of meanings attached to it, for example, in the Oxford Dictionary; a word expressing indefinite commendation; the morally excellent; the agreeable, the adequate and harmonious; a word, too, that is chiefly a predicate, to remind us that we must look for it as a quality in things, rather than something, like Plato's forms, with an existence of its own. Our business here, however, is with the morally good. We need not trouble about the goodness of the good knife, or the good fight, or the good thief, or the good smashing blow. There is a sense in which we call good anything which promises to help us to effect what we want to accomplish. On what is good in this sense, Mussolini and Savonarola may be expected to agree. But what do we mean when we say that truth, chastity, reverence, courage, are good; yet also that it may sometimes be good to tell a lie or break a contract? Even here there is no one recognized meaning or definition to which we can appeal. At best, we can try to find out how various reputable authors have used the term. And for them, as for the rest of us, we can see all kinds of associations colouring their expositions, and sub-meanings slipping in through every crack. Still, there are certain more or less definite types of characterization, of which a few may be quoted here.

Whatsoever is the object of any man's appetite or desire, that is it which he for his part calleth good. (Hobbes.)

Good means every species of joy, particularly the joy that comes from the fruition of any desire. (Spinoza.)

Whatever makes a man more happy or more perfect is good and is an object of desire as soon as we are capable of forming the conception of it. (Reid.)

The common characteristic of the good is that it satisfies some desire; and desires are adopted and unified by a single spiritual self. (T. H. Green.)

When we speak of a good deed, the mere overt act whereby things in space change their place is not good or evil; it is regarded as a cause of what is good, and not good in itself. (Sorley.)

Goodness is an affair of motives or wills. Goodness consists not in the good things we get, but in the good directions of our wills which good things satisfy. (Alexander.)

We may speak of the good, generally, as that which satisfies desire. It is that which we approve of, and in which we can rest with a feeling of contentment. . . . The good is coextensive with approbation. (F. H. Bradley.)

II

Now it will be noted that several of these actually insert the term to be defined in the definition; most of them also imply, with a certain

cheerful carelessness, that the good is the desired or the desirable —as if these two were necessarily the same, or as if to either of them we could link anything else either in the way of connotation or denotation. For what is the desired or the desirable? Can it indeed be stated at all, or is it one of those ultimates, those *summa genera*, of the schoolmen, which elude definition? This is indeed, it would seem, inevitable, if, like Aristotle's *eudaimonia*, the good is end and not means. But surely we ought to be able to form some notion of what is desirable for its own sake, the attainment of which will leave us with whatever peace and content is possible for mortal man. Or must we always be on the march, searching for we know not what, our only consolation the wages of for ever going on? Yet, even if we could find it, would it be recognizable? Would not each of us have his own good? *Quot capita, tot bona*—even *summa bona*. How can there be one *summum bonum* for a Luther, a Hitler, a Caesar Borgia, a Francis of Assisi, and the deacon of a dissenting chapel? Merely to identify it with satisfaction or pleasure (bodily or mental) or interest or happiness or what is generally approved, gives no assistance. All of these, like men's ideas about God, differ according to differences in men's nature, training, environment, and their knowledge of their world and of themselves. Thus, the formula, "I ought to secure what is desirable, whether pushpin or poetry" becomes either "I desire what I desire," or "I do what I do," which, as F. H. Bradley has remarked shrewdly, destroys the difference between good and evil altogether, and lays morality in its grave.

Yet can anyone rest satisfied with this lame conclusion? As Rashdall has bravely put it, "There is something absolutely true or false in ethical judgments, whether we or any number of human beings at any given time actually think so or not. Such a belief is distinctly implied in what we mean by morality. The idea of such an unconditional, objectively valid moral law or ideal, undoubtedly exists as a psychological fact" (*Theory of Good and Evil*, ii, p. 211). The difference between good and evil is vital. Aristotle's "acolast," or Shakespeare's Richard III, knows, or ought to know, that he is asking for the impossible. Good, morally good conduct, is the only thing that matters; and between the good and the bad, as between the right and the wrong, an impassable gulf is fixed. But who fixed it, and where can we find it mapped out? And what if I choose to disobey? Who will suffer, myself, or others, or all of us?

III

However unsatisfactory the answers to these obstinate questions, we are on well-trodden ground. And the answers that have been given divide themselves into two classes. First, that of Kant and

the Categorical Imperative, of Bentham, of T. H. Green and others; of whom each offers us a formula, as applicable to all actions. Follow the good will; aim at pleasure with its six "marks"; make for the common good. The second class, of which Sir David Ross and Mr. Prichard are outstanding modern examples, prefers to consider the reasons for specific maxims; tell the truth, keep your promises, return the books you have borrowed. It has often been pointed out that, in actual life, the first is too general for practical guidance. How is the good will manifested in spending a shilling on a casual mendicant rather than on a toy for my infant son—or, of course, vice versa? Is the greater pleasure gained, for me or my family, by my putting a Brahms symphony on the gramophone or working out a cross-word puzzle with them? As for the maxims of the second group, there are so many provisos and modifications in regard to each, that we seem to be contemplating the negation rather than the explication of morality.

We have already had forced on us the two questions, what sort of pleasure ought I to aim at, and what is the authority behind the moral law? The first really implies the second; because the assertion that some pleasures ought to be preferred is necessarily an appeal to a moral law. Law is a term which is equally hard-worked in morals, in science, and in politics. Yet we can only avoid the risk of confusion between all three by carefully keeping the sphere of each of them distinct from the others. Doubtless the rod, whenever it is used, suggests authority and compulsion. If a law is broken, we say, we shall be punished. If the law so broken is a law of nature, nature will punish us! But this is a piece of mere mythologizing. Laws of nature are at best only declaratory, shorthand statements, as we once learned from E. Mach, of the results of observation and experience. If A takes place, then probably (and which of us would dare to omit the adverb?) X will follow. If we want X we must try to bring A into being, and we shall (again, probably) achieve X; a formula which holds good whether X is the starting of a motor-car or the winning of the Derby, the production of sulphurous anhydride from sulphur or the rapture of a saint.

It is therefore highly dangerous to talk about the "absolute sway of the law of nature," or "the relations between phenomena and the rules and the laws which govern them" (Meyerson, *Identity and Reality*, p. 24). There is no imperative, and no authority, in a law of nature. And others as well as utilitarians may ask if there is any formal difference in the laws of the State or of morality. The authority of political law, whether national or international (as we have been rudely reminded of late), rests on its sanctions; that is, the events, pleasant or unpleasant, which can be brought about after the law has been obeyed or disobeyed. Keep your contracts, pay

your taxes, or you will find yourself in trouble. We need not admit that justice is the interest of the stronger, to agree that the administration of justice in the State depends on strength sufficient to enforce it. And what of the moral law? Avoid adultery, falsehood, quarrelsomeness, spite. On what compulsion must I? (We have all asked Shylock's question.) Either there is no assignable reason (you must, because you must), or the "law" becomes the statement that if we want a peaceful life, we shall do well to avoid adultery and the rest. But what is this save Butler's enlightened self-love, with which, as we recollect, conscience is always kind enough to agree? And what is there to prevent me from taking another line of action, and, to use Bentham's phrase, "pocketing the consequences"? I may even smile at threats of venereal disease. Nor can I be sure either of the results at which I aim or the misfortunes I may suffer. If I am liable to miss the pleasure that a moral act may be expected to bring, I may equally well escape the pain that should come from not performing it. This uncertainty has been urged by Prichard in his British Academy lecture, *Duty and Ignorance of Fact.* We are brought back to probability as the guide of life (Butler again), and morality is reduced to a calculation of chances.

It would thus appear that the morally good, like good in general, is that which is expected to lead to some kind of satisfaction; but that since men are infinitely various, there can be no one good or satisfaction, but only goods and satisfactions, as each makes its separate appeal or claim. And if this is correct, there can be no one moral law, it would seem; but only the statement that certain goals will be reached by certain paths; as, for example,

> Early to bed and early to rise
> Will make a man healthy, wealthy and wise.

And indeed, this is the point to which every one of the statements on p. 373 would appear to lead.

IV

When we are dealing with law, however, it is necessary to guard against another mistake; that of confusing obedience to *this* law with obedience to some law or other. Most writers on ethics tend to identify the moral law with their own exalted conception of what morality demands or implies. But the moral law may be formulated by other people in terms highly unacceptable to us; yet their loyalty may be as uncompromising as our own. Jael, the wife of Heber the Kenite, entrapping Sisera her guest to his death, may be as devoted to an imperative of some kind as James Martineau himself; or an Indian Thug, strangling the passing stranger in honour of his goddess; or even the nomad savage who kills his aged parent. There may be

no one law, obedience to which brings universal happiness or commands universal moral assent. Yet it would seem that without obedience to some law, men have never been able to live. To say that there is no such thing as moral law because in some societies cannibalism is allowed and even recommended or enforced, and in others polygamy, would be as foolish as to say that there is no human language because some men talk German, others Swahili, and others Kanarese.

If then we are justified in concluding that a sense of law or obligation does exist in the human mind, however diverse its manifestations in conduct, can we regard it as categorical, or must we acquiesce in its being no more than declaratory or conditional? We must at any rate beware of pressing the distinction between the categorical and the conditional too hard. By the average man it is hardly recognized. "I must pay my debts; and if I do not, it will, of course, be the worse for me." "I must keep my word; and if I do not, people will naturally cease to trust or believe me"—a highly unpleasant result. But if you press him, and ask why he really does keep his promises—because of what will happen if he does not, or because he would feel unhappy at the thought that he had broken them—you will merely puzzle him. For both reasons, he will reply. If the *kalon* is also, as it would generally appear to be, the *ophelimon*, it does not for that reason cease to be the *kalon*.[1] Indeed, flatly to oppose duty to interest as a distinct principle of the moral life, and to say that you must either do your duty or aim at your interest or at what you consider to be your interest, will not work. We are in fact constantly doing things which, as we say, we do not like; but they are quite independent of our duty; as, for example, walking to the office in a storm of rain, or nerving ourselves for the labour of composing an article for which we hope to be well paid, or (the stock instance) going to the dentist. But all this is simply to avoid something we should like still less; to lose the fee or continue to suffer from the toothache.

We always choose what is, at the moment at least, the most worthwhile to us. Of any two alternatives, we fix on that which we expect in the long run to prove the less unpleasant. We choose it; in a sense, we like it. Would not anything else, indeed, be a contradiction in terms? We do not need to be psychologists to be aware that there is even a distinct satisfaction in swallowing the pill which will banish the indigestion, or losing a holiday to gain a lucrative situation. There are very few satisfactions, physical or mental, without a mixture of dissatisfaction or unpleasantness. The one, we say,

[1] The reader will remember R. L. Stevenson's character: "Though virtue to me is a name, and honour but the shadow of a sound, there are certain things which I will not do, and certain things which I will not stand."

is the price of the other; a price which all sensible men are perfectly prepared to pay. The greater part of life is a balancing up of satisfactions, so far as we can forecast them, and deciding which is most worth while; whether it happens to be health, an expensive cigar, foreign travel, an exhausting piece of study, a new suit of clothes, or martyrdom at the stake. If this aiming at what is most worth while, in the realm of what is open to us, involves, as it may very well do, serving the interests of others, we shall doubtless get the credit of being unselfish; if it does not tend to a result which others would regard as pleasant to ourselves, we shall be praised for putting duty before interest. But neither duty nor unselfishness are in any way factors in the matter. It is a choice between what, at the moment of choosing, I have come to like or dislike. It may bring pleasure to others, or it may not. In the first instance, they will approve; in the second, they will blame. It may mean that what I choose to do will bring loss to me and gain to them. None the less, the very fact that I have chosen to do it means that the loss is overbalanced by something that I prize more than what I have given up. I may have been influenced by the thought that I am pleasing others; but if I think of their pleasure it is because to give them pleasure, or even to see their smiling faces, makes me happy. I do not try to perform the impossible feat of adding their pleasure to mine. The same rule holds good for the brothers Cheeryble and for Mr. Quilp. If you would have me choose otherwise, you will have to weight the alternative (whether you do so by preaching to me of virtue or offering me a sugar-plum), or you will need to have begun earlier and to have given me a different set of preferences. Call it my duty or my interest, it is my decision and my choice.

V

Some twelve years ago, Mr. H. A. Prichard, as Whyte's Professor of Moral Philosophy, chose for his inaugural lecture this subject of duty and interest. The most valuable portion of it, to my mind, lay in his reference to Plato. Ever since the Stoics, the conception of duty has taken a larger place, if not a clearer shape, than in Plato; but the antithesis was as familiar to Plato as to the Stoics or to us. In fact, few have cared to express it quite as sharply as did Plato. Which would you prefer, he asked, to be good but not to be thought good, or to be thought good without being good? The necessity for such a choice might well daunt the most virtuous. His answer was—the former; not because goodness would find some other way of rewarding its followers; but because goodness is a pleasant and delightful thing in itself. As soon ask whether it is better to be healthy or only to have a healthy appearance while

disease lurks beneath the skin. The reason, he went on to say, is because this is how we are made. We cannot go counter to our nature. A race is appointed for us to run; we must keep within the tapes, or we shall come to grief; but if we keep within them, we can run with ease and success. We are not animals or slaves. It is not the sugar that rewards obedience, or the whip behind the word of command that counts with the man who understands his own nature. He must function according to a certain type of activity. He must adapt his conduct, not to the environment without, but to the vital principle, the *élan vital*, as it were, within. Only then can he be in harmony with himself; and beyond that, who would wish to go? What further gift could heaven itself have in store? Such harmony is not a means to other satisfactions; all other experiences and achievements and sensations are of value only as they lead to harmony. We thus pass from a good that is a means to the good that is the end; that final good, as Aristotle expresses it, for the sake of which all other so-called goods are desired.

And here two further observations must be made. First, the above account of satisfaction delivers us from another confusion which has been responsible for deplorable perplexity, especially in ethical writers in this country; the confusion between what we speak of as pleasure, happiness, satisfaction, and enjoyment. Not one of these words has a recognized meaning as distinct from the rest. The plain man is aware that pleasure often suggests to him the pleasures of the senses; but he would not dream of confining the word to that connexion. The result is that he is never quite sure what kind of pleasure he is being asked to talk about. Philosophers with surprising frequency and carelessness have overlooked the distinction of which the plain man is dimly aware. Utilitarians seem to pass unconsciously from the greatest pleasure to the greatest happiness of the greatest number; and even Kant, who would rule out happiness as well as any form of pleasure or of satisfaction from motives for obedience to the moral imperative, can still speak of happiness as something that we can expect God to secure for the righteous man at the last.

We need not now work out some precise definition for each of these words. It is enough to notice that the territory which they all inhabit is clearly divided into two regions; in other words, that pleasure, enjoyment, and even satisfaction, can be regarded as a quantity or a quality. The English Utilitarians, for the most part at any rate, have chosen to speak of pleasure or enjoyment as a quantity; a matter of arithmetic. If pleasure is desirable (and what else, they confidently ask, could any sane man suppose it to be?) then, obviously, the more pleasure the better. We must (*must!*) aim at the maximum sum of pleasures; the greatest happiness; and then,

since, as obviously, the pleasure of two is more than the pleasure of one, and the pleasure of ten more than the pleasure of two or three, they go on with equal naïveté to add "of the greatest number."

Hence at once their fascination and their failure. For most people feel themselves to be safe in comparing pleasures. There is more pleasure for me, says one, in reading Ethel M. Dell than in Tchechoff; for me, says another, in a game of skittles than in mountaineering; or in eating tripe than in toying with caviare. And why should we not go on to compare fifteen units in "the perfect feel of a fourer" with ten units of a successful putt on the green? But the moment a serious attempt is made to work out the sum, the absurdity of any such calculation is patent. We can neither increase nor amass pleasure by adding unit to unit, or measure the extent of this pleasure as compared with that. The same is true of pain, however unfortunate this may be for the wish to make the punishment fit the crime. And pleasure can neither be increased by subtracting pain from it, nor diminished by adding pain to it.

On the other hand, to see in pleasure a quality rather than a quantity, is to see it, not as a possession, which it can never be, but as the accompaniment of action. Herein lies the justification of the familiar maxim, "if you desire pleasure, do not aim at it." The only way to secure pleasure or satisfaction which is worthy of the name is to act in a certain way. Pleasure is the result, if our previous argument is valid, of right functioning; that is, of functioning in harmony with the law, the conditions, of our being. There is little to be gained from attempting to distinguish between pleasure and happiness and the rest; or even from regarding pleasure as the gratification of the senses, and happiness or satisfaction as the gratification of some higher element in our experience. The latter may seem to us the nobler; but the former is only to be condemned if its connexion with action is forgotten, and if its pursuit leads us athwart the conditions of our human life and so makes us attempt the impossible.

This brings us to our second observation; that all satisfactory conduct (it is as well to avoid the ambiguous term "good" here), all that to the rightly trained is most worth while, is dependent on the recognition of a pattern already given. Pattern, as Aristotle might well remind us, is universal in the world of living things. The fatal mistake of Darwin, and of what often passes for Bergsonism, is to forget this. The modern study of heredity has emphasized the view of Aristotle that all physical life is a progress from *dynamis* to *energeia*, however it may be influenced, and thwarted, by environment.[1] Every species is what it is. Chance could never create a species,

[1] This has been strikingly brought out in Sir C. Sherrington's Gifford Lectures, *Man on his Nature*, especially ch. iv.

nor destroy it. Chance can affect the lives and destinies of individuals; but only by modifying from without the persistent and advancing pattern of the living force within. And this is true, *mutatis mutandis*, of the mental and spiritual life. We are so made as to function, we said, in certain ways. If we are to give an adequate meaning to the term law as employed in morals, it will not be the result of thinking of an imperative imposed on us from without, whatever the sanctions by which it is fortified, or the rewards with which it is equipped, but of the interior pattern, which we can only thwart at the price of self-contradiction. We must work out our lives "according to the pattern seen in the mount." In this sense, man is a legislator for himself, and autonomous. And he can only find satisfaction or happiness when his life embodies the rational or spiritual principle, or, as the theist would say, the image of God, which transcends the individual life yet is fulfilled as it works therein. He must be, as we have said, in harmony with himself.

VI

Now, in what way is this harmony to be described? What sort of action, of functioning, is implied by it? What is the type of practical activity which our nature demands, and which can be counted on to yield a lasting satisfaction? Those who are familiar with Plato's *Republic* know that the author devoted his whole book to the elucidation of the answer. Strangely enough, ethics has for the most part neglected what was fundamental in Plato's exposition, and confined itself to the consideration of the simple opposition between the one and the many; the individual and his neighbours, and perhaps, if the writer is a Christian, his enemies. This is true of Butler and Kant, of Bentham and J. S. Mill, of Ross and Prichard. The decision I am bidden to make is between my good and the common or general good. But this view is inadequate or positively false. No man is simply an individual, set off, so to speak, against the rest of the world. Nor is my world composed of myself and an indefinite mass of individuals, all standing in the same relation to me as I do to all of them. Each of us is a member of a group—of a number of groups: the family, the clan, the tribe, the community, the church, the nation. Doubtless, I begin with loyalty to the smaller group; but I must not, and, as a matter of fact, I do not stop there. To appeal to the conception with which Bergson has made familiar, morals must be dynamic, not static. My loyalty must reach out from family to clan, from clan to tribe, tribe to nation, or from my own little Bethel to the universal church, I cannot stop till I reach the whole human race.

"Seid umschlungen, Millionen."

This is how morality actually does work. Even the savage finds that his loyalties to his clan, his age-group, and his family stabilize one another. By this constant expansion alone can morality escape the petrifaction of impulses inprisoned in tablets of stone and loyalties turned into yardsticks.

My membership in a group means that, to a greater or less extent, I identify myself with its other members. To be a member of a group means to share certain possessions and activities with the rest. I no more want to turn my wife and children out of my house and live there alone, than I want to drive off the ground all the other members of my cricket-club and play a match by myself. In fact, it is by the elements in our life which we actually share with others that the group is constituted. The fuller the participation which it effects, the more stable its foundations. Sharing, therefore, is not a matter of the common use of property. Property can no more constitute sharing than it can ensure happiness. All true sharing in any group or community must be the sharing of rights and duties. In the family group, for example, each member can and must claim certain services from each of the other members; father, mother, older and younger children; and each is aware of the services that he in his turn must render. The family is, in fact, the system of those separate and distinct rights and duties which each acknowledges to each. The same is true of the village, the tribe, or the clan; the more primitive, indeed, the community, the more it approximates to the family, inasmuch as the rights and duties of which each man or woman is the subject vary with the members of each sub-group, and almost with every other member of the unit.

Thus, whether we think of the information available on primitive communities, or of the groups of which we ourselves have actual experience, the juxtaposition of rights and duties is not one of duty and interests, still less of selfishness and unselfishness, and even less of willingness and unwillingness. In a normal group, and under normal circumstances, the duties will be performed for each member who can claim them as readily as the claims are received. We think, as it were, in terms of the whole. A does not perform his appointed tasks for B, nor B for C; but each for the complete unit, of which he is an integral part; their gain is his. Apart from theirs, his would be the less. No one lives enisled in a sea of alien humanity. That would not be life. It would be death. We are persons, in constant and inevitable touch with other persons, invading them, so to speak, and invaded by them in turn. So far as we are ourselves, we transcend ourselves. We can be called real only so far as we are approaching a community not yet realized. And when I find myself regarded,

at least in part, by others as responsible for our common safety, when in some day of gloom I am drawn into their grief or despair, when I am joining with them in a task where each must do his utmost if it is to be accomplished at all, I discover myself, I am aware of something I never suspected. I could not have suspected it because, previous to this sharing in toil, it was not there.

Tension indeed there will always be. For no man attains this level of ideal membership of the group. No man can live save in a group; and no group can live save as the theatre of rights and duties. And in every stable group, duties for the most part are willingly performed and rights gladly acknowledged. But man is never completely harmonized, either with himself or with his group or groups. However willingly or instinctively he shares, there is always some hankering after possession. The theologian may call it original sin, or the corruption of man's heart; the philosopher may regard it as the subversive and destructive principle in all human society, laying cities flat; issuing at the last in red ruin and the breaking up of laws, and recalling the Heracleitean interpretation of life as perpetual struggle. At the present moment in the world's history, we may well ask ourselves if it has not gained the upper hand, so that all the costly results of man's slow co-operation are being flung into the fires of insensate greed. But all history forbids us to despair. If the activity and the results of sharing could have been destroyed, they would have been destroyed long since. Like mechanism in the physical world, the greed for possession is everywhere, but it is everywhere subordinate. Nor could greed itself find anything to feed on, save through the results of the harmony of rights and duties in the group.

VII

Let us then come back to this ideal of the functioning in a group, with its sharing of these rights and duties, its struggles and hopes, its failures and its achievements, its common life and the satisfactions which apart from that common life would be impossible, but which exceed anything that can be enjoyed in solitude. A moment's reflection will show how this provides for every healthy pleasure, and how it also involves trust, confidence, self-subordination, loyalty and (if we free the term from mere sentiment) of love. Aristotle in his analysis of the essentials of human society, like the early Christians in their peculiarly close association in the days of the infant *ecclesia*, was led straight to this principle of *koinonia*. It is in fact as we do and feel things together (to use the simplest language), whether by the fireside or on the battlefield, in the factory or on some perilous journey, that we discover those springs of joy that are hidden from us as long as we travel a solitary road.

Thus we come at last upon something that can be reckoned as an end in itself. It is not the obedience to a law which we must render in order to avoid loss or unhappiness; it is not the price we pay or the discipline we undergo, to secure for ourselves and our private enjoyment what otherwise we should miss. On the contrary, once we have experienced it, we should count other things but loss, to preserve this. However severe the tension of which we have spoken, however deep-seated the lie in the soul which makes us retire, like some solitary beast of prey with its booty into its own secret cave, it is in such shared and common activity and life that we find what can satisfy us in itself. It is the "architectonic" end, for the sake of which, if we are well instructed, we desire all else that we can hope to obtain. For everything else is the material, the necessary external supply, for this functioning of the whole man. It is indeed the *summum bonum*, needing the exercise of every virtue for its fulfilment, and yet providing the only field in which the virtues can find due opportunity of exercise. And it is the only end whose attainment is not corrupted by the poison of selfish possession, selfish feeling, or selfish pride.

On the other hand, if it is the end, it is also the means to the end. For this community, like personal affection, can never be complete. At the very moment of attainment, we are conscious of something else to be reached. To have to say "I shall never feel more deeply, or enjoy more rapturously, than now" is to find the cup of satisfaction snatched from the lip. The present is linked inseparably to the future. A man's grasp must be the same as his reach, if either is not to cause him the misery of a Tantalus. What is essential, if means and end are to be seen as the same thing, is that the activity involved in the one should be known as the activity involved in the other. Ordinarily, this is very far from being true. I pursue A in order that I may gain B, whether A gives me any pleasure in itself, or whether it comes to give me a kind of secondary and subsidiary pleasure through what I hope to gain from it. I pursue it only because it is a road to B; when B is attained, I shall have done with A. But with what we now conceive of as the Good, we do not pass from means to end; the more eagerly we pursue the means, the more we are conscious of the end.

VIII

Such is the result of starting, not from what we want, but from what we are, and from function as opposed to possession or feeling. And this brings us back to the conception of law. But not to a law imposed from without, and therefore capable of being questioned, defied, or neglected, and threatening, with its flaming sword, to

keep us out of our Paradise. It rises from within. It applies to us all, and is linked to all that makes life worthy or even possible, whether we think of the physical, the mental, or the spiritual. Like the laws of health, it may be said to authorize itself. We can see how in this sense knowledge and virtue are one; and no one is voluntarily bad. Yet it does not come by instinct. It needs to be taught, and the tension is there. We see and know the higher, we make for the lower. We forget what we share; we aim at what we can only possess. Every group must remove from its midst whatever hinders the sharing which is the essence of all existence, both of the group itself and of humanity. There is one abiding sanction which is infinitely more than prudential; "lest ye die."

Progress is this progress in sharing. We enter more fully into the activity of others, giving and receiving more intimately. And we pass from one group to another. Yet the narrower groups are never left behind. The wider the group, the less concrete; but not therefore the less real or the less beloved. The family group is normally the narrowest, the most concrete of all. Yet even in the family, a man is living in "the presence of canonized ancestors." And when he passes to ever wider groups, and perhaps at the last is conscious of the "choir invisible"—when, like the prophet or the martyr, his group is dominated by those great souls who dwell in a world of truth hidden from his dull contemporaries, but which, God helping him, he will open up to them, even though it be by his death, he brings to these larger and higher groups, and to his deeper and more absorbed participation in their life, all that he had learnt in the simpler and more manageable intimacies of the family. Man has for ever. Yet the Good, which summons him from beyond the furthest horizon that he can see, is the same as that which comes and turns the unforgiving minute as it shoots past him into the moment that is itself one and infinite. The good, like life itself, is neither of the present, the past or the future. It transcends them all. It links them together. In this sense, at least, it is beyond the limitations of time. It is eternal. And therefore what we desire, we can be conscious of having already; yet what we have, we shall always be able to desire.

THE FREE-WILL CONTROVERSY

Professor LEDGER WOOD

Few philosophical controversies have been waged with greater acrimony than the controversy between the libertarians and the determinists; the vigour with which both sides of the question have been espoused is due not only to the metaphysical importance of the issue—which is indeed considerable—but more especially to its moral and religious implications. No other philosophical issues, with the exception of those pertaining to God and the immortality of the soul, are of greater ethical and theological moment. So thoroughly has the question been debated that further consideration of it may seem futile. Has not the evidence been so completely canvassed on both sides of the controversy that further discussion will be a fruitless reiteration of long familiar arguments? The free-will problem is considered by many contemporary thinkers an admittedly unsolved but completely outmoded problem to which they respond with impatience or complete indifference. This attitude toward the problem is quite indefensible since the question of the freedom of the will is one of those perennially significant philosophical issues which takes on new meaning in every age and is particularly significant in the context of contemporary science and philosophy. Recent psychology, in large measure through the influence of Freud, has achieved a more penetrating analysis of human motivation by bringing to the fore certain hitherto obscure factors which are operative in volition. The psychology of the subconscious by filling in apparent gaps in the psychological causation of volition has furthered the case for determinism. Furthermore, behaviouristic psychology by subjecting all human behaviour, including so-called volitional acts, to a mechanistic formula bears directly on the free-will issue and like the Freudian psychology seems to strengthen the deterministic position. Recent developments in the physical sciences are not without their significance for the free-will issue; the principle of indeterminacy in quantum mechanics has been eagerly seized upon by the libertarians in the belief that it affords a physical foundation for their position. Finally, in philosophy proper the progress of philosophical analysis and of the philosophical theory of meaning renders possible a more exact statement of the free-will issue and permits a more just appraisal of the traditional arguments on both sides of the free-will controversy than has hitherto been possible. The concepts of determinacy, indeterminacy,

compulsion, choice, etc., are elucidated by analysis in accordance with the theory of meaning of recent positivism and radical empiricism. It is for these reasons that a contemporary re-examination of the free-will issue is not only legitimate but most imperative.

The question of the freedom of the will, reduced to its barest essentials, is simply this: *Are all human acts of will causally produced by antecedent conditions or are at least some volitional actions exempt from causal determination?* The determinist insists that all actions, even the most carefully planned and deliberate, can be causally explained and that if we knew enough about a man's hereditary traits and the environmental influences which have moulded his character, we could predict just how he would behave under any specified set of circumstances. The free-willist or libertarian, on the other hand, asserts that there are at least some human actions of the volitional type in which the individual by the exercise of his will-power, acts independently of conditioning factors—that he, so to speak, "lifts himself up by his boot-straps."

The freedom of caprice (the traditional *liberum arbitrium*) when precisely defined means that some, and perhaps all, volitional acts are causally indeterminate, that is to say, are not conjoined in any uniform way with antecedent conditions. The uniform antecedents of free acts are, on this view, undiscoverable for the simple reason that they do not exist. Free-acts are the products of pure chance and, therefore, remain unexplained because they are inherently inexplicable; they are, in the strict sense of the word, miracles—a miracle being defined as any occurrence which cannot be brought within the compass of natural law. The freedom of chance, conceived in this extreme fashion, would, if it existed, utterly disrupt social intercourse, for, no one could possibly anticipate when another, or even himself, might act freely, or in other words, miraculously. Perhaps the closest approximation to a capricious free-will is to be found in a lunatic—but even his acts are not genuinely free, since a psychiatrist can, at least ideally, explain and even predict them. The maniac's actions, however strange they may seem when judged by the sane man's standards of normal behaviour, are psychologically explicable; they conform to certain uniform patterns of abnormal psychology, which, in turn, are assimilable to the laws of general psychology. The free-willist—however much he may seek to disguise the fact—introduces an element of indeterminacy into human behaviour; he admits an effect, namely, the volitional action, without a sufficient and adequate natural cause. The free-will of man, according to the extreme defenders of the free-will doctrine, swoops down from above and injects into the volitional situation an arbitrary, capricious, and incalculable factor.

I propose to give a brief résumé of the free-will controversy, examining first the arguments for the freedom of the will and then stating the case for determinism. Although the position taken throughout the present paper is avowedly deterministic, the attempt will be made to state with fairness the case for and against both of the rival positions and on the basis of these arguments, to give a just appraisal of the two positions. The strength of the deterministic position will be found to lie not only in the positive evidence which may be adduced to support it, but also in its easy ability to meet the arguments advanced by the free-willists.

Arguments for the Freedom of the Will. The arguments of the free-willist are for the most part humanistic and non-scientific in character and may be conveniently considered under the following heads:

(1) the introspective or psychological argument,
(2) the moral and religious arguments,
(3) the argument from physical indeterminacy.

(1) *The Introspective or Psychological Argument.* Most advocates of the free-will doctrine believe that the mind is directly aware of its freedom in the very act of making a decision, and thus that freedom is an immediate datum of our introspective awareness. "I feel myself free, *therefore*, I am free," runs the simplest and perhaps the most compelling of the arguments for freedom. In the elaboration of his argument, the free-willist offers a detailed description of what, in his opinion, is introspectively observable whenever the self makes a free choice. Suppose I find myself forced to choose between conflicting and incompatible lines of action. At such a time, I stand, so to speak, at the moral cross-roads, I deliberate, and finally by some mysterious and inexplicable power of mind, I decide to go one way rather than the other. Deliberative decision, if this description is correct, is analysable into these three constituents: (*a*) the envisaging of two or more incompatible courses of action, (*b*) the review of considerations favourable and unfavourable to each of the conflicting possibilities of action, and (*c*) the choice among the alternative possibilities.

Deliberative, or so-called "moral" decisions, are fairly numerous in the lives of all of us and are made on the most trivial occasions, as well as on matters of grave import. The university undergraduate's resolution of the conflict between his desire to see the latest cinema at the local playhouse and his felt obligation to devote the evening to his studies, trivial and inconsequential as it may seem, is the *type* of all moral decisions and differs in no essential respect from such a momentous decision as his choice of a life

career. Each of these decisions to the extent that it is truly deliberative involves (*a*) the imaginative contemplation of alternative actions, (*b*) the weighing of considerations *for* and *against* the several alternatives involving, perhaps, an appeal to ideals and values approved by the moral agent, and finally (*c*) the choice between the several possibilities of action. At the moment of making the actual decision, the mind experiences a *feeling* of self-assertion and of independence of determining influences both external and internal. The libertarian rests his case for free-will on the authenticity of this subjective feeling of freedom.

The phenomenon of decision after deliberation is an indubitable *fact* which determinist and free-willist alike must acknowledge, but the real issue is whether this fact warrants the *construction* which the free-willist puts upon it. The determinist, replying to the introspective argument, urges that the *feeling* of freedom is nothing but a sense of relief following upon earlier tension and indecision. After conflict and uncertainty, the pent-up energies of the mind —or rather of the underlying neural processes—are released and this process is accompanied by an inner sense of power. Thus the feeling of freedom or of voluntary control over one's actions is a mere subjective illusion which cannot be considered evidence for psychological indeterminacy.

Besides the direct appeal to the sense of freedom, there is a psychological argument which *infers* freedom from the mind's ability to resolve an equilibrium of opposing motives. The allegedly "prerogative" or "critical" instance of free-will, is that in which the will makes a choice between two or more actions which are equally attractive, or equally objectionable. If, after a careful weighing of all the considerations *for* and *against* each of the alternative actions, the mind finds the rival claimants exactly equal, a decision is possible, argues the libertarian, only by a free act of will. We weigh the motives against one another, find the scale balanced, and then, in the words of William James, . . . "we feel, in deciding as if we ourselves by our wilful act inclined the beam."[1] This argument from the equilibrium of motives is indeed plausible, but the determinist has a ready reply. *If* the motives really had been exactly equal and opposite, then the mind would have remained indefinitely in a state of suspended judgment and consequent inaction or would, in Hamlet fashion, have oscillated between the two incompatibles, never able to yield to one or to the other. The analogy of the balanced scale would lead one to expect the will under these circumstances to do just this. Indeed, there are undoubtedly some pathological minds which are in a perpetual tug-of-war between conflicting tendencies of action and whose wills, as a consequence, are completely paralysed.

[1] *The Principles of Psychology*, vol. ii, p. 534.

But in normal minds the "motives" on the one side or the other become momentarily stronger because of some new external factor injected into the situation or because of the inner reorganization of forces and then action immediately ensues. Often the decision is determined by accidental and contingent circumstances—a literal flip of the coin—or perhaps one allows one's action to be decided by a chance idea or impulse, that is to say, by a "mental flip of the coin." In any case the fact that a decision is actually made testifies to the eventual inequality of the opposing forces. Under no circumstances is it necessary to resort to a mysterious, inner force of will to "incline the beam" one way rather than the other.

Still another introspective fact cited by the libertarian in support of his doctrine is that the moral agent is in retrospect convinced that he might, *if he had chosen*, have followed a course of action different from that which he actually pursued. The belief that there are genuine alternatives of action and that the choice between them is indeterminate is usually stronger in prospect and in retrospect than at the time of actual decision. The alternatives exist in prospect as imaginatively envisaged possibilities of action and in retrospect as the memory of the state of affairs before the agent had, so to speak, "made up his mind." Especially in retrospect does the agent recall his earlier decision with remorse and repentance, dwelling sorrowfully upon rejected possibilities of action which now loom up as opportunities missed. How frequently one hears the lament: "I regret that decision; I should, and I could, have acted otherwise." Now the contemplation of supposed alternatives of action along with the sentiment of regret produces the illusion of indeterminate choice between alternatives, but a careful analysis of the import of the retrospective judgment, "I could have acted otherwise than I did," will, I believe, disclose it to be an empirically meaningless statement. If I decided in favour of this alternative, rather than that, it can only mean that the circumstances being what they were, and I in the frame of mind I was at the time, no other eventuation was really possible. My statement that I could have acted differently expresses only my memory of an earlier state of suspense, indecision, and uncertainty, intensified by my present remorse and the firm determination that if, in the future, I am faced with a similar choice, I shall profit by my earlier mistake. There is, however, in the deliberate situation no evidence of genuine alternatives of action, or the indeterminacy of my choice between them.

(2) *The Moral and Religious Arguments.* The moral argument assumes a variety of forms, but they all agree in their attempt to infer volitional freedom of the moral agent from some feature of the moral situation. The most characteristic feature of moral

action is that it seems to be directed toward the realization of an ideal or the fulfilment of an obligation. But, argues the free-willest, it is of the very nature of an ideal or an obligation that it shall be *freely* embraced; the acceptance or rejection of a moral ideal and the acknowledgement of an obligation as binding can only be accounted for on the assumption of the agent's free choice. The very existence of moral ideals, norms, or standards which, though *coercive* or not *compulsive*, testifies to the freedom of the agent who acknowledges them. Thus did Kant in his famous formula: "I ought, therefore I can" directly infer the agent's freedom from his recognition of moral obligation.

The moral argument is so loose in its logic that unable to put one's finger on its fallacy one is tempted to resort to the logicians' "catch-all," and call it a *non sequitur*. A moral agent's adoption of a moral ideal or recognition of a moral obligation simply does *not* imply that he possesses a free-will in the sense of psychological indeterminacy. An adequate critique of the moral argument would require a detailed psychological account of the genesis of moral ideals and duties without recourse to freedom of the libertarian sort and I am convinced that such an account is forthcoming. The emergence of ideals in the mind of an individual moral agent along with the feeling that such ideals are coercive is largely non-volitional and even when it rises to the volitional level and represents a choice between competing ideals, there is even then no reason for abandoning psychological determinism. The moral argument for freedom is found, on close examination, to be the psychological argument in disguise and like it, is introspectively false; there is no indication of volitional freedom either in the original adoption of moral standards nor in subsequent moral decisions in accordance with those standards once they have been embraced.

The moral argument for freedom has sometimes been stated from the point of view not of the moral agent but of the moral critic who passes judgment on the action of another or even upon his own actions. A judgment of praise or blame, of approval or condemnation, so the argument runs, imputes freedom to the agent whose action is judged. When I praise your unselfish and benevolent acts, I imply that you could, if you had chosen, have been cruel and selfish instead. Condemnation of another's conduct seems even more surely to suggest that he acted willingly, or rather "wilfully." Otherwise, would it not be in order to pity rather than condemn the wrong-doer? Should we not say with condescension, "Poor misguided fool, he can't help what he does, he is simply that kind of man"? Instead, we reprove his action and by so doing implicitly acknowledge that he is a free moral agent. A novel variant of this argument is contained in William James's essay "The Dilemma of

Determinism." The determinist, so James argues, finds himself in a curious logical predicament whenever he utters a judgment of regret. If I, a determinist, pass an adverse judgment on my own or another's actions, I thereby acknowledge that they ought not to have been, that others ought to have been performed in their place. But how can I meaningfully make such a statement if these particular actions, and no others, were possible?[1] "What sense can there be in condemning ourselves for taking the wrong way, unless the right way was open to us as well?"[2] James advanced the moral argument, not as an absolute *proof* of freedom (he admits that it is not intellectually coercive), but rather as a belief to be *freely* embraced. As a pragmatically effective, moral fiction, freedom has much to be said in its favour: the belief in freedom no doubt fosters moral earnestness, whereas the belief in determinism may, at least in certain persons, induce moral lassitude. Most defenders of the free-will doctrine do not, however, share James's cautious restraint; they advance the moral argument as a conclusive proof of an indeterminate free-will. The fallacy again can only be described as a *non sequitur*. Moral appraisal has nothing to do with the freedom of the will; the mere fact that *I* approve certain of *your* actions because I consider them good and condemn others as wrong may give some indication of *my* moral make-up, but it proves nothing whatsoever regarding the freedom of *your* will. Your moral acts, even though completely determined, may be judged in accordance with prevailing standards to be laudable or reprehensible. I praise your good conduct and condemn your bad conduct even though both are inexorably determined and—the determinist would add—I too am determined to judge them as I do. Hence the freedom of a moral agent cannot possibly be inferred from the judgments of approbation and disapprobation passed upon him by a moral critic.

The determinist finds no difficulty in assimilating to his deterministic scheme the facts of moral approval and disapproval. Moral valuation is not the detached and disinterested judgment of a moral critic, but is an instrumentality for the social propagation of norms of conduct. Morality is essentially a social phenomenon; society has gradually evolved its patterns of social behaviour which it imposes upon its individual members by means of various sanctions including the favourable or adverse judgments which members of society pass upon one another. Judgments of moral valuation rest upon the socially constituted norms of action and are the media through which these norms are communicated from individual to individual. I reprove your unsocial or antisocial behaviour in the belief that my adverse judgment may influence you to desist therefrom. When I pass

[1] William James, *The Will to Believe and Other Essays in Popular Philosophy*, p. 163. [2] *Ibid.*, p. 175.

a moral judgment on another, far from implying his free-will, I tacitly assume that my judgment of him, in so far as he takes cognizance of it, operates as a determining influence on his conduct. Thus moral criticism when interpreted naturalistically harmonizes with the theory of moral determinism.

Another moral argument, closely paralleling the argument from obligation, stresses the concept of moral responsibility. The free-willist considers freedom a *sine qua non* of responsibility; his argument runs: "Without freedom, there can be no responsibility, but there *must* be responsibility, hence man is free." There are *two* ways of attacking this argument: (1) we may pertinently ask: "But *why* must there be responsibility?", or, (2) we may challenge the underlying assumption of the argument, namely, that freedom is an indispensable condition of responsibility. The first criticism is a rejection of the minor and usually tacit premise of the free-willist's argument, the conviction, namely, that there must be responsibility. The conviction prevalent among moralists that responsibility, obligation, etc., because they are morally significant must actually exist, would seem to be the outcome of a curiously perverse ontological argument. Whatever is morally useful and significant must actually exist. But why must it? What assurance have we that reality is constituted so as to satisfy the insistent demands of our moral nature? Even if responsibility could be shown to be an indispensable adjunct of genuine morality, this would not suffice to guarantee its factuality. There is only one way of establishing the fact of responsibility, and that is by exhibiting actual instances of morally responsible actions. The concept of moral responsibility no doubt admits of precise empirical definition and exemplification; there is a real distinction between responsible and irresponsible actions. But when responsibility is analysed in this empirical and positivistic fashion, it will be found in no wise to imply volitional freedom. A careful analysis of responsible actions will show them to be if anything no more indeterminate than non-responsible and irresponsible actions. And this brings us to the second criticism of the argument from responsibility: *viz.*, the failure to establish the alleged implication of the concept of freedom by the concept of responsibility. The concepts of freedom and responsibility are by no means indissolubly connected; on the contrary, the freedom of indeterminacy, far from guaranteeing responsibility, would, if it existed, actually be prejudicial to it. If freedom is the complete divorce of the will from antecedent conditions, including my moral character, I cannot then be held accountable for my actions. A will which descends upon me like "a bolt from the blue" is not *my* will and it is manifestly unfair to take me to task for its caprices.

Closely allied with—perhaps in the last analysis indistinguishable

from—the moral argument is the *religious* argument for free-will. The free-will dogma is deeply rooted in the Hebraic-Christian theology. The essential connection between freedom and responsibility to God is the real theme of the Book of *Genesis*: Man's freedom is necessary to insure what William James has aptly referred to as man's "forensic responsibility before God."[1] Were man not free, he could not be held accountable for his action, but he *must* be held accountable, therefore, man is free. The Hebraic doctrine of the freedom of the will arises from a paternalistic conception of the relation between God and man. On this view, moral principles are the commandments of God to which man yields as does the child to parental authority. But, just as a recalcitrant child may defy his father, so man may, at his own peril, rebel against the divine moral code. The principles of morality are authoritative in that they emanate from God, but they are not compulsive since man may or may not choose to conform to them. The paternalism of the Hebraic conception of God is embodied in the myth of creation. God created Adam and endowed him with a will, free to choose between good and evil. Adam yielded to temptation and his original sin has been transmitted to all his descendants. The story of the fall of man is a highly symbolic expression of the theological doctrine that man is accountable far his actions only on the assumption that they are free. Incidentally, the ascription of a free-will to man, absolves God from any responsibility for the sins of mankind and thus affords an easy solution to one of the most perplexing of theological problems, the problem of evil.

The religious argument may be dismissed quite summarily by rejecting outright the conception of God as a task-master who maintains discipline over humanity by conferring upon him a freedom which shall insure his responsibility and justify his punishment. If the Hebraic conception of an austere and vengeful God be renounced, the religious argument for freedom loses all force; it then reduces to the simple moral argument from responsibility to freedom, the fallacies of which have already been exposed. The determinist by his rejection of this particular conception of divinity is not necessarily committed to atheism. Determinism and theology in certain of its forms are entirely compatible; thus the theological doctrine of predestination, though of course very different in its emphasis from physical and psychological determinism of the naturalistic sort, is by no means inconsistent with the latter. There is then no strictly theological argument proof for freedom and theological considerations can at best serve to reinforce the moral argument for freedom.

(3) *The Argument from Physical Indeterminacy*. Free-willists have

[1] *The Principles of Psychology*, vol. ii, p. 349.

recently derived not a little encouragement from the advent of the principle of physical indeterminacy which even if it does not suffice to demonstrate freedom of the will, at least seems to remove a serious obstacle to its acceptance. If there is a real indeterminacy at the subatomic level of quantum mechanics, this affords at least the *possibility* of the physiological and ultimately of the psychological indeterminacy which constitutes the freedom of the will. Recent quantum theory seems on the surface to afford a physical basis for a volitional indeterminacy much as the swerve of the atoms invoked by the ancient Epicureans seemed to justify their free-will doctrine. But the contemporary argument is defective and in very much the same respects as its historic prototype.

Against the modern version of the indeterminacy argument, it may be urged in the first place that the physical theory of indeterminacy merely expresses an observational difficulty encountered in the attempt to determine both the position and the velocity of an electron and that consequently it posits a methodological and not the physical or ontological indeterminacy which is requisite for the purposes of the free-will doctrine. But secondly, even supposing that the indeterminacy principle is physical and not merely methodological, it has not been shown that this subatomic indeterminacy manifests itself in the behaviour of ordinary mass-objects and in particular that it is exemplified in just those neural processes which are supposedly the basis of the act of free-will. The psychophysical correlation of a neural indeterminacy with its psychological counterpart, could be effected only by the introspective observation of the volitional indeterminacy along with the underlying physical indeterminacy, and thus the evidence of introspection is an essential link in the argument from physical indeterminacy. The physical theory of indeterminacy is at the present time far from demonstrating the existence of or giving a complete picture of the *modus operandi* of a free-will and thus the freedom of indeterminacy remains, even on the background of physical indeterminacy, a more speculative possibility.

The Case for Determinism. Whereas the evidence for the free-will doctrine is largely humanistic and moralistic, the case for determinism is an appeal to scientific evidence; the determinist finds that the sciences of *physiology*, *psychology*, and *sociology* afford evidence that human behaviour is no exception to the causal uniformity of nature.

(1) *Physiological Evidence.* The more we know about the physiological and neural processes which go on inside the human organism, even when it reacts to the most complicated of stimuli, the more evident it becomes that there is no break in the continuous chain

of causation. Physiology gives us a reasonably clear picture of the mechanism of human behaviour. The behaviourists, the most recent recruits to the cause of determinism, have with infinite patience applied the objective method of the physiologists to human conduct; they have described in the minutest detail the mechanism of reflexes and the manner of their conditioning. There seems to remain no missing link in the causal chain from stimulus to ultimate response—even when that response is long "delayed." Delayed responses are mediated by very complex neural processes which on their subjective side are called conflict, indecision, and deliberation, but they are no exception to the behaviouristic formula.

(2) *Psychological Evidence.* While the deterministic thesis receives its most obvious support from physiology and behaviouristic psychology, introspective psychology makes its contribution also. An unbiased introspective examination of volition supports the theory of psychological determinism. The more carefully I scrutinize my decisions, the more clearly do I discern the motives which determine them. If one's powers of introspection were sufficiently developed, one could presumably after any decision discover the exact psychological influences which rendered that particular decision inevitable. Doubtless for a complete explanation of certain decisions it is necessary in addition to the conscious antecedents of the volitional act to recover the more recondite sub-conscious and unconscious influences; the extensive researches of the Freudians into the submerged factors in human motivation provide the explanation of otherwise inexplicable mental acts and therefore tend to supply the missing links in the chain of psychic causation. Indeed, the existence of consciously inexplicable conscious events was one of the most compelling reasons for the original positing of an unconscious or subconscious mind. It remains true, however, that a fairly complete account of the psychological causation of volitional decisions is possible even without recourse to an unconscious mind.

Perhaps the best classical statement of the case for psychological determinism was given by David Hume. Hume, whose introspective subtlety has rarely been surpassed, commits himself unequivocally to psychological determinism in his assertion that "There is a great uniformity among the actions of men. . . . *The same motives always produce the same actions.*"[1] Every historian, as Hume points out, appeals to this principle in judging the accuracy of historical documents; he asks himself whether the reported actions conform to what is known of human nature. And we might add, the same criterion is appealed to even in the evaluation of works of fiction. The novelist or the playwright gives a portrayal of his characters; he places them in definite situations, and then describes how they

[1] *Enquiry Concerning Human Understanding*, section viii.

act. If his account of their behaviour under these precisely defined circumstances violates any of the recognized laws of human motivation, his literary and dramatic artistry is to that extent defective. Thus the principle of psychological determinism serves as a recognized canon on historical, literary, and dramatic criticism, and while this does not "prove" the correctness of psychological determinism, it does afford confirmation of it from an unsuspected quarter.

(3) *Sociological Evidence.* The social sciences yield abundant evidence for a deterministic view of human behaviour. The fact that the conduct of large aggregates of individuals is expressible in terms of statistical law, although it is by no means a conclusive proof of individual determinism, certainly points in that direction. I may not be able to predict how you as an individual will behave in any specified circumstances, but I can formulate a statistical law applicable to a large group of individuals of which you are a member. It is difficult to reconcile the possibility of the laws of groups or mass action with individual free-will.

The conclusion reached as a result of the survey of the arguments on both sides of the free-will controversy is that the strength of the deterministic position lies not only in the overwhelming array of psychological, physiological, and sociological evidence for the uniformity of human behaviour, but also in its ability to meet the psychological, moral, and religious "proofs" of free-will. Accordingly, we seem fully justified in concluding that a capricious free-will, that is to say, a will capable of acting independently of antecedent conditions, psychological or physiological, is a philosophical absurdity.

DESCARTES ON MATERIAL THINGS

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According to tranditional philosophical terminology and to most interpretations of Cartesianism, Descartes is a dualist. This dualism is expressed in his fundamental distinction between two substances —mind and matter—and, though admitted to be full of difficulties and by many to be untenable, it has very generally been regarded as at least a clearly intelligible doctrine, consistently held by Descartes. That this is not so has been shown by Professor Boyce Gibson in his able and careful analysis of Cartesianism. The aim of the present essay is to draw attention to another difficulty that has not been sufficiently noticed; whether it is an actual one or only an apparent one due to a misunderstanding of Descartes is a question that may be left to those who read him differently and who may be able to remove one more charge of inconsistency. The general contention is that Descartes—and this point is conceded in expositions of Descartes—seeks to prove that there are material bodies, that material bodies are necessary for his own account of the physical universe, and that yet his own theory of matter as extension, even combined with motion, makes the existence of bodies (in the plural) impossible and hence any proof of such existence impossible. In fact, the employment of the idea of motion only serves to emphasize the difficulty and inconsistency of the theory. For Cartesianism in spite of its geometrical bias admits and, if it is to do justice to the modern scientific view of the physical universe, must introduce motion into its interpretation; but motion is taken by him to be solely change of place or translation from place to place, and consequently is so understood as to presuppose *bodies* or parts of matter.[1] Obviously there can be no such motion if there are no bodies to be transported or to change places; on the other hand, if motion is necessary in order that bodies may exist as well as that we may have knowledge of them, Descartes seems to be putting himself in a logically dangerous position. In the elaboration of this thesis some points of a general nature require to be kept in mind. The first is that Descartes because of the method he follows has in regard to material bodies initially only certain ideas in his mind, but as these ideas do not guarantee the existence of bodies he must show that the ideas have objective significance or are valid for an actual universe; this is the case also of mathematical ideas; and unless this requirement is satisfied

[1] *Principles of Philosophy*, II, xxv.

Descartes can never claim that his ideas are *knowledge*. The second is that to satisfy this requirement it is not logically permissible to accept as known a principle which is itself necessary to explain our knowledge of it, as Descartes does with motion; for it appears according to him that motion is an important condition of knowing both the existence and nature of bodies and yet that motion is to be understood in terms of bodies, consequently that Descartes in accepting the fact of motion is accepting the fact that bodies exist—just the fact that in accordance with his method and theory has to be established.

Descartes' doctrine of two substances is well known; some of its difficulties require preliminary notice. He seems to think that a substance may have more than one attribute but that it has one principal attribute which is its essence. "Although any one attribute is sufficient to give us a knowledge of substance, there is always one principal property which constitutes it nature and essence, and on which all the others depend."[1] What he goes on to say seems to reduce all attributes to one and to make the others dependent on it—what his own terminology signifies when he calls these dependent attributes *modes*; all this, however, tends only to confuse by corrupting the traditional notion of attribute and to render more difficult the interpretation of the metaphysical status of sense-qualities such as colours, etc. He also apparently in general seeks to maintain a distinction between the attribute and the substance characterized by it even though he admits that substance is not known otherwise than through its attribute. "Yet substance cannot be first discovered merely from the fact that it is a thing that exists, for that fact alone is not observed by us. We may, however, easily discover it by means of any one of its attributes. . . . For this reason, when we perceive any attribute, we therefore conclude that some existing thing or substance to which it may be attributed, is necessarily present."[2] This statement has important implications; it makes substance so utterly vague that it justifies Locke's designation of something we know not what; it consequently for purposes of knowledge puts all emphasis upon the attribute so that the notion of substance plays no important rôle in knowledge, and Descartes might just as well, as in places he almost does, regard the principal attribute as substance;[3] it makes substance an inferred entity and comes into conflict with his argument that the "Cogito, ergo sum" is an intuition (as well as that the *thing* or a body is an intuition of the mind) and thus justifies the objection of his contemporaries that the "Cogito, ergo sum" is an incomplete syllogism. The present purpose, however, is not to stress these difficulties about how substance is known, but to

[1] *Principles of Philosophy*, I, liii. [2] *Ibid.*, I, lii.

[3] Cf. Boyce Gibson: *The Philosophy of Descartes*, pp. 176, 300.

raise a question about what in either case is and can be known according to Descartes. He claims to show that there are two substances, distinct in nature, the essence or attribute of the one being thought, of the other extension; on the other hand, his argument is asserted to establish that *he* is a thinking substance and a created substance; he nowhere formulates an argument to prove that other thinking substances (apart from his theistic proofs for a Divine Being) and created substances like himself exist, but he does devote considerable effort to establish the existence of material bodies or substances. The ambiguous use of the term substance as applied to God and to created substances is noted by himself and has been noted by expositors of his theory. What has not been carefully noted is the ambiguous use of the term substance when he maintains that there are two substances, each with its distinctive attribute, and at the same time also maintains that *he* is a thinking created substance and that material things are created substances. The strict meaning of substance as applied to God makes him a monist and a spiritualist or idealist monist at that, for God is solely thought, a problem being thereby involved concerning the relation of God to an extended universe; the contention that there are two substances justifies his classification as a dualist; his assertion that he and material bodies exist makes him a pluralist; there seems no doubt that he continually supposes that there are many substances, cogitative and corporeal, and that the universe, metaphysically considered, consists of many substances, many ultimate real existences, if the word substance still retains anything of its meaning of metaphysically real existence. If this latter condition is not granted, the alternative is the Spinozistic theory of substance, attributes, and modes, which would introduce some consistency into Descartes' confusion. Nevertheless, the contention that material substances exist is important for his physical theories and partly or mainly for this reason he is anxious to justify it philosophically. It is the main theme of the present essay; and for the purpose of simplifying the discussion, the latter will be confined to the existence and knowledge of material bodies, both because Descartes does not discuss the existence of other minds and because the existence of bodies is most relevant to his physical theories.

In the *Meditations* Descartes wishes to see "if from the ideas which I apprehend by this mode of thought, which I call feeling, I cannot derive some certain proof of the existence of corporeal objects." The question he considers is how far the senses show that corporeal bodies exist and how much knowledge of such bodies they give. Reflection soon shows that the deliverances of the senses are not altogether trustworthy, for reason upsets what we naturally (or should it be, from early habit?) believe on the basis of sense. Though we should not rashly admit all the matters which the senses seem to

teach us, on the other hand, "I do not think," he says, "that I should doubt them all universally." His argument, however, does not carry one very far towards a conviction of the existence of things. The nature of the imagination justifies only the probability that body does exist; in case this proposition seems dangerously like assuming the point at issue, it is only fair to Descartes to note that he does not assert that the existence of bodies is inferred as a conclusion, but that he puts forward their existence as a possible explanation of the phenomena; he can understand the perceived working of the imagination if it is true that bodies exist; in the absence of other satisfactory explanations, for instance, God Himself, this one by means of bodies must hold the field. The argument rests upon the causal principle, and the latter in the most favourable case justifies merely the belief in vague undefined corporeal objects. In passing, it must be observed that Descartes speaks of body and of bodies indifferently, and this indifference obscures the difficulty which is the subject of this essay. The next step is to answer the question, how far is their nature known from sense? Sense-data, he holds, constitute evidence only for the belief that processes are occurring in bodies and are responsible for these sense-data: this part of his theory touches the historical distinction between primary and secondary qualities. So far as his argument at this point in the *Meditations* is concerned, he does not go so far as to deny that colours and so on are in bodies, but only that we cannot claim to *know* that bodies are coloured. And because we do not have this knowledge, we have no justification for ascribing, but only a natural or habitual propensity to ascribe, colour to bodies. Hence so far as the evidence of sense is concerned, bodies must be looked upon as causes of the sense-data; in other respects it leaves the nature of these causes undetermined. Nevertheless, bodies have properties that are known and known to be properties of bodies. This point is developed by Descartes in the second half of the *Second Meditation*, where he analyses the case of a piece of wax: the conclusion he comes to is that the nature of the wax in no way consists of the sensed qualities, but solely of extension. In other places Descartes reasserts[1] this same view. Finally he declares that objects and their nature are not apprehended by sense at all but by "an intuition of the mind"; and it is because of this that the mind can have a certain knowledge of bodies and have it within these limitations. According to this theory the essence of matter is extension, with the dimensions of length, breadth, and depth. Descartes sometimes emphasizes by explicit terminology that he is thinking of body in its universal character. If bodies are now viewed as being extended, it may be just possible to reconcile this confident assertion with the more limited contention, which strictly should be the conclusion drawn, that we cannot claim

[1] *Principles of Philosophy*, II, iv, xi.

to know sense-qualities to be qualities of bodies; for in accordance with a statement made by Descartes and quoted previously in this essay, he can be interpreted to the effect that sense-qualities are not essential properties, essence being contrasted with qualities that are dependent and the phrase "nature of body" being taken in the logical sense of essence on which other qualities are dependent. Among the different reasons to be found in Cartesian theory for such an interpretation there is one, in conformity with Cartesian logic, to the effect that reason can perceive no logical connection and hence no logical dependence between extension and these sense-qualities; accordingly the latter do not belong to bodies, as logic requires them. It may be noted that this complete absence of logical connection is equally the logical basis for Descartes' fundamental distinction between mind and matter.

The importance of Descartes' doctrine of extension as the essence of matter lies, for our present purpose, in its implications. The first implication is that there is no distinction between space and matter. "In truth, the same extension in length, breadth, and depth, which constitutes space, constitutes body." He also goes on to deny the validity of the conception of a vacuum; there is no such thing as empty space. "If it is asked what would happen if God removed all the body contained in a vessel without permitting its place being occupied by another body, we shall answer that the sides of the vessel will thereby come into immediate contiguity with one another."[1] What is Descartes really asserting? That the world is a *plenum* or that it is just empty space? In some passages he seems to assert that the world is a *plenum*, for it is full of or occupied by something, this something being corporeal substance; yet in other passages he asserts that corporeal substance is simply extension, in which case there is no sense in speaking of anything that occupies space. His reliance on the word substance leads him to evade a fundamental difficulty in his theory; he accepts and rejects its implications just as it suits him. Though the notion of substance and attributes is a primary feature of his theory, and though space is regarded as the attribute of corporeal substance, substance might quite effectively be dropped and extension adopted as the fundamental notion. The notion of substance and attribute and his notion of extension are difficult, to say the least, to fit together. The second implication, recognized by Descartes himself, is that body is not merely extension but that bodies have each a fixed and unalterable extension. This appears from his analysis of a piece of wax. The latter when heated is commonly said to expand or to occupy a greater space; this, Descartes holds, is erroneous, for it continues to occupy the same amount of space. What has happened is that its particles (what are they on Descartes' theory of matter?)

[1] *Principles of Philosophy*, II, x, xviii.

are wider apart; this greater space is not the space of the wax, however, for it is occupied by other bodies and the extension of the wax remains just what it was. It may be added that as a consequence the constancy of matter must be for Descartes the constancy of extension. The third implication is that, besides being continuous, space or matter is also uniform or homogeneous. This follows from the argument which deprives matter of all sense-distinguishing qualities and leaves only extension. "We attribute to extension a generic unity."[1] In his account of the world[2] he postulates this homogeneous space or body; primary matter is not to be conceived after the manner of philosophers, but "let us conceive of it as a true substance perfectly solid, which uniformly fills all the length, breadth, and depth of that great space, in the midst of which we have stayed our thought, so that each one of its particles always occupies a position of that space so related to its magnitude that it could not fill a greater, nor contract itself into a less nor allow, while it remains there, any other to enter it." This postulate is difficult to reconcile with his theory that the essence of matter is extension and gives one the impression that Descartes is assuming body as something additional to extension. If the character of homogeneity is stressed, how can Descartes define and particularly locate "external place" which requires the recognition of a surface of a body? "By superficies we do not here mean any portion of the surrounding body, but merely the extremity which is between the surrounding body and that surrounded, which is but a mode; or that we mean the common surface which is a surface that is not a part of one body rather than of the other."[3] This definition presupposes the existence of, and the possibility of recognizing, bodies; but if matter is simply extension, is continuous, and homogeneous, as it is on Descartes' theory, it is difficult to see how his presupposition can be admitted.

Much that Descartes writes about space and bodies may easily mislead by its apparent simplicity and particularly by its familiarity. He expounds his view of space to a large extent by recourse to the notion of bodies and thus appears to be giving a clear exposition because it is made in familiar terms. Not merely does he repeatedly overlook his identification of extension with body, but he also writes as if *body* meant and implied the same as *bodies*. If matter is defined in terms of extension and if there is no difference between extension and body, there ceases to be anything of the ordinary meaning in the terms *vacuum* or *empty space* and *filled space*. The difficulty lies either in Descartes' term substance or else in his giving to extension a meaning different from the ordinary person's meaning, possibly one intermediate between the common meanings of space and

[1] *Principles of Philosophy*, II, x.
[2] *Le Monde*, chapter vi.
[3] *Principles of Philosophy*, II, xv.

material bodies. If, as has been argued, there is both a metaphysical and epistemological difficulty about body and more so about bodies, that is, as to whether bodies exist and how they can be known, this general difficulty applies to the human body, even though Descartes maintains that it exists, that we know it, and that we may draw conclusions about it.[1] Most of Descartes' account of sensation and knowledge of bodies presupposes the existence and knowledge of bodies. At most he may be entitled to assert that a state of matter exists such that there occurs a certain kind of sensation, but this matter is matter or space in general and the sensation is not necessarily, so far as the evidence goes, a sensation in a human body but only in body or in space. His notion of space as continuous and homogeneous is irreconcilable with the notion of bodies, and there is nothing by which bodies can be distinguished as bodies. Since there are no bodies, either existing or known, place or position cannot be determined by the relations of bodies to one another; it can be determined only by the adoption of a purely arbitrary point of reference in thought. Thus, as is the case with geometrical truths according to his own view, there is no evidence for believing that such positions in thought have any counterpart in the actual universe.

Descartes, however, in conformity with the contemporary scientific trend, has to recognize the fact of motion and to admit the idea of motion into his interpretation of the physical universe; in doing so he cuts himself adrift from a position which is in many respects akin to that of Parmenides as interpreted by Professor Taylor and Burnet. The idea of motion is made to play an important rôle also in the Cartesian account of semi-mental phenomena such as sensation, memory, and imagination. The outstanding feature of his theory to be noticed now is that all the variety of matter is traced by him to motion and its varying degrees.[2] The partition of extension "by thought alone makes no difference to it; but all the variation in matter, or diversity in its forms, depends on motion." Motion is the factor by virtue of which the homogeneity and uniformity of Cartesian extension or body gives place to variety and difference. As the distinguishability and hence the recognition of bodies rest on difference and variety, the knowledge as well as the existence of bodies must be considered to depend on motion. A uniform motion is inadequate to produce variety, obviously so where the medium is already also homogeneous and undifferentiated; accordingly Descartes has to postulate a variety of motion communicated to various parts, a postulate which seems to be wrung from Descartes because he already knows a variety that awaits explanation; but it still amounts to little more than saying that the physical universe is

[1] *Principles of Philosophy*, II, ii.
[2] *Ibid.*, II, xxiii. Also *Le Monde*, chapter vi.

composed of varying packets of motion. There can be no doubt that motion is exceedingly important for Cartesian theory; it is required in addition to extension in order to account for the observed world of phenomena; it is always the latter world which Descartes wants to explain; and extension alone is unable to do it. In spite of all, however, motion creates grave difficulties within his theory.

When he speaks of motion as the source of variety, we have interpreted him as including under this variety the differentiation of space or body into bodies. Now whether bodies are to be regarded as a necessary or merely as a contingent feature of the world is a question to be decided on the basis of the metaphysical status of motion. Descartes himself seems to regard motion as a contingent fact, contrasted with the necessary and fundamental character of extension; it is viewed by him as something superadded to the world of extension by the Divine Being, though this addition receives no rational explanation from Descartes. Thus one issue that arises requires a consideration of the obscure relation between extension and motion. This question of bodies, however, in so far as dependent on motion, concerns only the homogeneity and uniformity of space or body and its differentiation; there is also the feature of continuity, which gives rise to the question as to what sort of motion is possible in such circumstances, to the question whether motion, as defined by Descartes, namely as a transference of a body from one place to another, is possible at all; and if it is not possible, bodies must be not even contingent but impossible, Divine agency notwithstanding.

To define what motion is, is one thing; to show that such a definition is capable of application to a physical universe is quite another. Any definition is an affair within Descartes' choice and competence; but one has a right to ask whether and how such a definition fits consistently with other ideas or definitions into his theoretical scheme and whether his definition, seeing that he is claiming by means of it to give an account of the existing universe, has any actual counterpart in that universe, the fundamental nature of which is said by him to be extension. As he lays so much stress upon extension as the essence of matter, either motion is another attribute, co-equal with extension and belonging also to the essence of matter, or else motion is a property dependent on extension or what Descartes calls a mode. These alternatives are both possible in the light of what he says in a passage quoted at the beginning of this essay. Which alternative does he accept? In that passage he speaks of a principal attribute, and his arguments seem to identify this with extension; in this case motion would be a quality dependent on extension. Yet Descartes' theory is in many places inconsistent with this; he requires motion in addition to extension because the latter alone cannot provide an explanation of the physical universe. He

does not describe motion as a mode of extension in the sense in which figure is a mode, for motion is a mode of the "mobile thing" (about the possibility of which this essay is inquiring and has still to decide).[1] Such phrases are not helpful, since they seem to beg the issue about motion; so too does the statement that duration, the diverse modes of extension or those that belong to extension are illustrated by "all figures, the situation of parts and their motions, provided we consider them simply as modes of the things in which they are."[2] Such phrases suggest that Descartes is simply taking for granted "mobile things" without noticing the difficulties they involve for his theory. If motion resides in or is a property of the mobile thing and a thing is essentially extension, motion must come under the concept of extension, unless the word *mobile* signifies the acceptance of a quite different property, namely motion. That it cannot be brought under extension follows also from his statement that motion involves time or duration;[3] the latter in turn, although Descartes is obscure here, seems to be an attribute of substance. "Because any substance which ceases to endure ceases also to exist, duration is not distinct from substance except in thought."[4] The same statement could obviously be made about extension. The relevant question, however, is not whether duration is distinct from substance but whether it is an attribute distinct from the attribute of extension. That the two are distinct would be a consequence of Cartesian logic, for according to the latter a quality or property that cannot be logically deduced from another quality or property is distinct from it; and there is no clear deduction of duration from extension. Thus for several reasons motion and extension must be considered distinct: motion is not a mode of extension in the sense in which figure is a mode of extension; it is a mode of the "mobile thing"; nor can motion be inferred from extension. Hence there is no necessary relation between the two. An extended or corporeal thing *need* not be in motion; extension can be conceived without motion, though Descartes does not consider whether it is possible or impossible to conceive motion without extension and what would be the implications of this; but his argument is not particularly convincing because it rests on the idea of a body being at rest and assumes a specific view of rest and motion. This absence of any necessary relation between extension and motion in Descartes' theory leads him to regard the relation as purely contingent—a contingency which is expressed in his postulate that God endows matter quite arbitrarily with motion of all kinds. The recourse to God is a sign of the difficulties which Descartes is encountering because of his emphasis upon extension. Nevertheless, the

[1] *Principles of Philosophy*, II, xxv.
[2] *Ibid.*, I, lxv.
[3] *Règles Pour la Direction de l'esprit*, xii.
[4] *Principles of Philosophy*, I, lxii.

extended universe must be considered as much a creation of God according to Descartes as the mobile universe; and the contingency of motion in relation to extension cannot be decided by a reference to divine agency. If Descartes accepts divine creation at all, extension and mobility in the absence of any clear evidence for the logical priority of the one over the other must be held to be equally fundamental in respect of their metaphysical status. But, to use Cartesian terms, motion and extension are distinguishable only for thought; existentially they are united and inseparable; and hence the fundamental physical existent is not extension (nor motion) but *mobile extension*. That a rigid distinction and separation between extension and motion is not necessarily a metaphysically real distinction but only a logical one or one made by thought is Descartes' reason for saying that it is possible in reality and that God could therefore have created a world solely extended and without motion. The point is that the contingency of motion in relation to extension is based primarily on logic, not on divine agency, for the latter is itself, so far as it is a question of what God could do, interpreted in the light of that logic. A logical distinction or a distinction in thought is, however, only a possibility where the actual universe is concerned; it still leaves the possibility that motion and extension are united (just as analogously mind and body, though logically distinct and separable in thought, are yet united in the human being). It is possible therefore that the extension conceived by the mind in logical distinction from motion is something abstract: real extension is mobile extension. This consequence is seen by Descartes and admitted by him in discussing *place*, and it has important repercussions upon the science of mathematics in seeking to interpret the actual physical universe. If the latter is actually a mobile one, there can be no permanent *place* if place is such as defined by Descartes; for, as he says, "there are no points in the universe that are really immovable as will presently be shown to be probable" and "we shall conclude that there is nothing that has a permanent place except in so far as it is fixed by our thought."[1]

The idea of "mobile extension" as the fundamental physical existent leads to a question about time, which in Descartes' theory never receives the attention which extension gets. In discussing[2] the notion of "dimensions" he says that there can be in one and the same subject an infinity of different dimensions; under the latter come not only length, breadth, and depth, but also weight, velocity, and many others. It must not, however, be assumed that these dimensions are real; a decision on this point is rather a matter for the physicist. They may be mere devices of thought. That there is

[1] *Principles of Philosophy*, II, xiii.
[2] *Règles Pour la Direction de l'esprit*, xiv.

no real distinction between length, breadth, and depth is of course more easily understood than that there is no real distinction between these and, say, weight. "There is indeed something real about the weight of bodies or velocity of movement or the division of the century into years and days; but there is nothing real about the division of the day into hours and minutes." This again is easily understood, for years and days are given to us as uniform (relatively) periods within nature, but hours and minutes are artificial divisions. This doctrine seems to amount to an acceptance of the distinction (metaphysically real) between extension and motion, for it distinguishes between the dimensions of extension and the dimension of motion (namely, velocity); and it also suggests that more dimensions than the three of extension are requisite for the interpretation of the physical universe; but Descartes always leaves the possibility open that such dimensions are mere devices of thought. *Time* seems to be a dimension in the Cartesian sense. Time is different from duration which is a primary feature of the physical universe; it is strictly a measure of motion and yet is based on a comparison of one motion with another, particularly with the greatest and most regular motion, namely that which gives rise to years and days.[1] It is conceivable therefore that there could be duration, but not time without motion, that an extended but motionless universe could endure but could not be known scientifically. Time has thus something artificial about it; it is a mode of thought; and is not an ultimate property of the universe. Such a view seems simple and clear; yet it raises many difficulties which are increased by other statements made by Descartes. Not merely is time a measure of motion and itself measured by motion, but it is also a mode of thought under which the mind thinks duration. It has just been suggested that there could be duration (as in the case of a mere extended universe) without motion; hence motion and duration could be regarded as distinct and separate properties of the physical universe; but now they appear, in some way not elucidated, to be connected, seeing that time is both the measure of motion and a mode under which the mind thinks duration. A still more important point for the purpose of this essay is that time or the duration of things (Descartes uses the alternative terms) "is of such a kind that its parts are not mutually dependent, and never co-existent."[2] On the basis of this Descartes formulates a theistic argument which has grave implications for his "Cogito, ergo sum" principle. "From the fact that we now are, it does not necessarily follow that we shall be a moment afterwards, unless some cause, viz. that which first produced us, shall, as it were, continually reproduce us, that is, conserve us." What is relevant at the moment is the view which is

[1] *Principles of Philosophy*, I, lvii. [2] *Ibid.*, I, xxi.

being taken of time or duration; the latter is discrete, its parts are related in no other way than before and after. Time is not continuous, and Descartes seems to be asserting that it thus differs from space and that this difference explains why no science of time analogous to a science of extension is possible. It is not easy to see why Descartes should make the distinction on this basis, for it might be said equally of extension that from the fact that a body is at place x it does not necessarily follow that it shall continue at x unless some cause continually keeps it there. If the continuity lies outside duration or time and ultimately in the Divine Nature, why should the continuity of extension be regarded as inherent in extension rather than in the Divine Nature? The change of place of a body, according to Descartes, is calculable; but it must be noticed that this calculability rests on the basis of motion and not on the basis of extension alone and that motion is itself due to Divine agency. An analogous difficulty also arises concerning motion which Descartes apparently regards as continuous. But why? Is it because extension is continuous? If, however, motion involves time (velocity is a dimension of motion) and time or duration is discontinuous, why should it not also be held that motion, like the self, requires continual re-creation from moment to moment? It is difficult to see what co-existence which characterizes extension and not time has to do with the matter nor what exactly is the bearing of the idea of mutual dependence which is lacking in the case of duration, unless continuity of motion and of extension are being assumed as the basis of what Descartes wishes to assert.

It has been shown that he does assert the continuity of extension; it has also been shown that what exists physically is "mobile extension." The question now to be faced is how or whether motion is possible at all on Descartes' postulates. He asserts it of course, but that does not necessarily mean it is consistent with his principles. His own account of it is given in his theory of vortices;[1] in formulating it he says that the particles are all in contact so that there is no empty space between any two of them; before they are endowed with motion, they should be conceived as forming the hardest and most solid body in the world. These terms hard and solid are difficult to interpret when matter is defined as essentially extension. The theory also gives an answer to a question raised earlier when it was asked which alternative—empty space or filled space—was being adopted by Descartes in his concept of extension; the answer is filled space or that the universe is a *plenum*. What motion is possible under the conditions postulated? Since Descartes defines motion as change of place and place is defined by reference to bodies, the phrase "mobile extension" requires a special interpretation, for

[1] *Le Monde*, chapter vi.

extension or *matter* cannot move in this sense. Strict adherence to Descartes' conception of two substances, one of which is matter, renders movement of material substance impossible. If movement is to be possible, we are driven to accept as the primary physical existent not "mobile extension" but "mobile bits of extension." Since extension is homogeneous, bits of extension are indistinguishable and unrecognizable, consequently motion cannot be perceived. All such difficulties Descartes ignores or surmounts by recourse to Divine agency and by begging many issues by his use of words like particles (which ought to be bits of extension) and body. Apart from the difficulty of conceiving clearly how bits of extension can move and how in such a case "place" can be defined, there is the difficulty as to how motion is to be introduced into a compact continuous extension and as to how, even if introduced, it could continue. Under such conditions one particle could not move without pushing another out of its way, and this in turn must do the same; the movement of one particle must become a movement of every particle. Descartes postulates the endowment of different bits of extension with different motions by the Divine Being; and in this way he tries to obviate the consequences of his own theory, for the one consequence is that, whatever may be the varied motions and their directions at first, the particles tend to develop a motion in a single direction, namely, in a circle, as he recognizes,[1] and the second is that, however variously motion is at first distributed, it tends to become uniform throughout extension. These consequences cannot be avoided unless Descartes when he refers to acts of the Divine Being intends to assert continuous interference or re-creation of a variety of motion, which interference, in view of his acceptance of the constancy of the quantity of motion, could only take the form of re-distribution. Now since Descartes maintains that extension is one and continuous and uniform, this concept alone is inconsistent with the notion of bodies; and equally a uniform motion will not account for the existence of variety. The consequence of his own premisses is that bodies are impossible. Yet since motion is responsible for the variety of matter, this variety and hence bodies are traceable to Divine agency in endowing different bits of matter with motion of varying degrees. This is one of several points where Descartes' rationalism, as stated in the second essay of the *Discourse*, fails to implement its claims. For it remains incomprehensible how the Divine Being can, on the basis of what Descartes has himself laid down, accomplish what is contrary to that basis. What the Divine Being does achieve is to alter radically the nature of extension and to transform it into something no longer continuous and uniform in the sense defined by Descartes but something possessed of a granular structure in

[1] *Le Monde*, chapters vi–viii.

virtue of which bits of extension are detachable from other bits, What this amounts to is that real extension must be considered to be different from the mathematical extension which Descartes discusses in his general philosophy. Real extension does not conform to his *idea* of extension and consists of mobile extensions or bits of extension and is neither more nor less continuous than time. The theoretical transition from the one to the other cannot be effected by Descartes in any logical way, and hence he has to resort to the idea of Divine agency as the mediating factor. So far as *bodies* can be said to exist, their existence is not to be understood in virtue of any logical principles but by reference to a Divine act. Since the Divine Being must be regarded as the creator of the physical universe with all its variety and not merely of a continuous uniform extension, the existence of bodies must be considered as also an ultimate feature of the actual physical universe. The acceptance of such existences makes Descartes a pluralist; but this pluralism is not inherent in his philosophical rationalism; consistently with the latter he remains a dualist; his pluralism arises from his attempt to give an account of the physical universe and from his inability without the aid of the idea of a Divine Being to accomplish this by means of his initial principles.

THE LANGUAGE OF CONTROVERSY

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THERE are, plainly, very many reasons why a controversy should be inconclusive and abortive, and yet constantly reviving. It might, for example, be one that interests only the very stupid or prejudiced; or one that interests everyone deeply, demanding an answer of everyone, yet not yielding any really decisive evidence; or the controversy might be one in which thesis and antithesis are natural expressions of opposed psychological types ("Tough-" and "Tender-minded" people); or it might be one that is commonly conducted in terms that are vague, misleading, and question-begging. In this paper I shall confine myself to the last of these reasons: the use of language which makes it extremely difficult to understand what either of the parties are really asserting, and where, if at all, they contradict each other. I hope I shall not be thought to exaggerate the importance of this familiar factor, but I hope to show that in many important controversies the best will in the world and all the patience and tolerance a man can muster are not sufficient: special training and considerable independent reflection are necessary if the debate in question is not to prove as profitless as those described by Omar Khayyám of Naishapur:

> Myself when young did eagerly frequent
> Doctor and Saint, and heard great Argument
> About it and about: but evermore
> Came out by the same Door as in I went.

As examples of controversies centring upon *controversial terms* I should cite: many (not all) debates about methods of enquiry and the value of beliefs variously derived, about moral, political, and religious questions. In such debates we are almost quite sure to meet with "Reason," "Truth," "Significance," "Meaning," "Abstraction," "Freedom," "Representation," "Democracy," "Equality," "Order," "Force," "Progress": and where we do, we may identify *one of the causes* which explains the perennial and abortive character of these controversies. For something is wrong with these terms: what is it? They are all emotive, certainly: but of course any familiar word for the important, vital activities and influences of our lives is bound to acquire an emotive meaning. This will be *misleading* only where the emotive meaning is attached to a word whose descriptive meaning is vague—so that we are led by

the use of the word to approve or disapprove of a "something we know not what." And plainly all these terms, and very many others characteristic of controversy, are under suspicion among philosophers upon precisely this ground—they are vague or indefinite in their descriptive meanings. In this paper I shall try to show exactly what is meant, and what is not meant, by this statement. In other words, I shall try to show of what sort is that "vagueness" which is objectionable—i.e. which hinders the common understanding and logical resolution of disputed questions.

I begin by indicating certain features of language which are commonly called "vagueness," viz. generality, indeterminacy of degree, and ambiguity. These, as I shall show, are not objectionable in the sense explained, and do not serve to distinguish controversial terms, though they usually characterize them.

(*a*) *Generality:* "Democracy" is used for a great many different kinds of government: but if it were used for those features, and only those, which all these kinds have in common, it would be no more misleading than the word "mammal." Plainly, the generality of a word becomes a source of confusion, only when it is in some way concealed, or is estimated differently by different parties.

(*b*) *Indeterminacy of Degree:* Such phrases as "half-empty," "nearly full," "many a day," "hardly long enough," are vague in the sense of lacking fixed boundaries. "The House of Commons is half full" is an explicitly vague statement: many members might enter or leave, and a reliable observer might still make the same report. There is an uncertain "fringe": the words proclaim this, and do not mean the same as "50 per cent to the nearest whole Member." Mr. Max Black has argued recently that all physical description is vague in this sense, but *inexplicitly* so. Such inexplicit vagueness may sometimes be a source of confusion: and it is plain that Freedom, Certainty, Reasonableness (of conduct) are vague in this sense, whether explicitly or not. But again it is not this vagueness that distinguishes the typically controversial terms.

(*c*) *Ambiguity:* Most descriptive words are ambiguous and this does not in itself give rise to controversies. "The Board of Trade has fixed a price for floor-boards" does not lead people to ask what is the underlying φύσις which the two "boards" have in common. (Of course we may argue that one or both of these senses of the word is metaphorical: that unless the two things had *something* in common the metaphor would never have been intelligible or acceptable. But of course the essential point is that we are not now using the word for this supposed common something.) We use the word in *two senses* here, and we know which sense is operative in each case, by considering it in its verbal or enacted context. This must be a mutual process: we have to find *the* interpretation which makes sense as a

whole: so that a sentence may have only one plausible meaning, although all the descriptive words in it are ambiguous. Of course it is easy enough to frame sentences which even in an enacted context, are not unambiguous in this way: but it is plainly no reproach to a word to say that it has many different senses. Even a word which is used as a technical term, with a standard written definition, is not always used in the same sense: "Force of argument" may find its way even into a book on mechanics, and even a brand-new manufactured word is not proof against metaphorical uses, and so the duplication of senses. But two things seem to be characteristic of the innocently ambiguous word: (i) Its operative sense is given in a minimal context: thus we easily distinguish the several senses of the word "book" in the brief phrases: "reading a book," "holding a book," "printing a book," "translating a book," and "re-writing a book": and if someone should demand that we introduce such signs as "type-book" and "token-book" we should know that he was being burdensome and pedantic. (ii) We are able to say with minimal hesitation whether a suggested use of the ambiguous word is "proper" or not: the word is used in accordance with well-established custom, with relatively little irregularity. (This does not imply that such a custom remains forever, or that customary usage is the same thing as good usage.)[1]

I shall now offer examples to suggest, that, while the typically controversial words all commonly share these three characteristics and are emotive, they are distinguished from others on three grounds, which taken *together* explain their objectionable character. These are: their various senses tend to occur in the same contexts; they are difficult to distinguish from each other; they are not determined by any universal custom.

(*a*) *Confusion in Context:* A little reflection easily convinces us that Freedom, Democracy, Reason, have each many different senses, and in many contexts it is not possible to decide easily which sense is operative. Of course we can begin by blaming the other words in the context: "Democracy, over a long period, must result in greater equality." Now we can't be sure which Democracy is meant until we know which equality is meant. This is typical of controversy. The description and the implications of Democracy, Freedom, Significance, are commonly given in words that are very vague and emotive. But of course I here want to discover what in general characterizes all such controversial words both in relation to each

[1] On Indeterminacy of Degree, see M. Black, *Philosophy of Science*; on Ambiguity, see I. A. Richards, *The Philosophy of Rhetoric* and *Interpretation in Teaching*.

other, and in relation to non-controversial terms. And first we must notice that their various senses all tend to occur together in the same discussion. Thus in a current philosophical debate, someone will have something to say about meaning = equivalent words or sentences, and someone else (or the same person) about meaning = designation, and someone else about meaning = emotional connotation, and someone else about meaning = associated images, etc. And where one sign must do duty for all these meanings (and even for any selection of them), an intolerable muddle naturally results. And we may contrast here, such innocently ambiguous words as "board," "train," "bull," "bail," "bat," "china," "post," and so on. Here, I think, we have one of the distinguishing characters of controversial terms: but not a sufficient description, since such a word as "book" is used in conversation with the most rapid shifts of sense, without noticeable confusion.

(*b*) *Similarity and Overlap:* It frequently happens in a discussion that a description or definition of a given term is offered ("That is what I mean by Democracy and all I mean"), but as the argument proceeds, the meaning of the word shifts, step by step, so gradually that no single change brings the disputants to a stop ("Ah, but now we are using the word in a different sense" or "But according to your original definition, that wouldn't be Democracy at all"). The gradations are analogous with those of red into brown into yellow, or yellow into green into blue. The different senses of the word seem to form themselves into series, so that minds which would notice and refuse the direct transition from sense A to sense C, do not notice at all the transition from A to C via B. (From Equality of Property to Equality of Opportunity via Equality of Income.) Sometimes we can see that the adjacent senses actually overlap. Thus Democracy might be made to include the following as defining properties:

Elected legislature and executive;
Universal suffrage;
The "Separation of Powers";
Equality before the law;

or, just as likely, to include the following:

Elected legislature;
Universal suffrage;
Independence of the judges;
"La carrière ouverte aux talents";
A high degree of social equality.

In such cases the two sets of properties have certain features in common: but the word "Democracy" is not being used for that selection of characters which the two sets share. It is used now for one of the sets and now for the other. In such a situation, if there is no

analytical symbolism, transitions of all kinds are possible without the raising of immediate suspicions. For with the best will in the world, people differ in their ability to discriminate between similar conceptions, and this ability is liable to interference from emotions and desires whether conscious or repressed.

(*c*) *No Universal Agreement:* This is the most striking difference between ordinarily ambiguous words and those that are the centre of controversy. The different senses of "book" and "board" and "head" are admitted by everybody, but many people will either say that there is really only one sense of "Democracy" or "Meaning" or "Reason," or at least that certain alleged senses of such words are not "true senses." This is a new kind of vagueness: There is no universal agreement about the uses of "Democracy," etc., because each party has its own conception attached to such words, and denies other conceptions. It is not now a matter of inability to discriminate. It is a matter of refusing to share the use of a certain sign. This unwillingness is typical of controversy. And the reason would seem to be that the controversial words have in themselves a value, are themselves prizes to be fought for, standards to be displayed. For they are *emotive*: they have acquired (for a time at least and for certain groups of people) a stimulating power *for themselves*, a power more or less independent of particular contexts and of what they are used to describe. People are therefore unwilling to use them in any sense which would be felt to clash with the emotional responses which the words arouse in them. And it is this association of emotive meaning with the syntactical characteristics I have discussed, that explains why certain words are the focal-points of obstinate and intractable controversy.

I shall now try to confirm this conclusion by examining three stages of controversy: the setting forth of thesis and antithesis, the debate itself, and the "winning" of the debate by verbal means.

(*a*) *Theses:* What is to be accepted as a sense, or as *the* sense, of an emotively charged word? E.g.: What is the real nature of Justice? Is not Intuition to be included in Reason? The disputant will choose the sense or senses of Justice of which he himself approves: and, as Plato enjoys telling us, he may even choose to call "Justice" what has never been dignified by that name before. And of course these questions about the use of language are commonly regarded as being about things-not-words. This in its turn rests upon the highly controversial character of many quasi-logical terms. So that purely verbal statements are regarded as equivalent with statements apparently non-verbal:

> This is not how the word "Justice" is used;
> This is not the proper use of "Justice";
> You would be mistaken to describe that as "Justice";
> It is false to describe that as Justice.

(*b*) *Arguments:* Because controversial terms are so easily confused it becomes possible to make inferences (whether inductive or deductive) from different senses of these terms, without its being noticed. And we may well believe that the Honest Partisan is not deliberately deceiving himself or anyone else, when he turns a blind eye to ambiguities that would damage his case. His opponent may, of course, succeed in detecting a paradox or a contradiction: but this neither supports his own view nor disposes of any inferences made from any one sense of the controversial words. Hence a deadlock. Again it often happens in argument that a disputant is induced to *concede* a certain sense to a vague term, only to find later that this is fatal to his own thesis. And we may well believe that this often occurs because two incompatible senses of an emotive word *both* appeal to a single emotion associated with the word. (E.g.: Some kinds of liberty and equality are certainly incompatible; but I may allow *both* to be described as "democratic," because this word excites approval, and so do both the liberty and the incompatible equality.) In such cases we might say that the disputant's feelings are "ambivalent": and surely it is true to say that many great controversies are waged *within* the chief and the greatest protagonists, as well as between them. In such cases the intended meaning of the disputant is really a hesitation between two senses: and I believe that in argument, as in poetry and in liturgy, we often use words in this way.

(*c*) *Victory* in a particular debate may be purely verbal (i) when one side is refuted in Zeno's manner; (ii) when one disputant has won assent to his own definitions of the key-terms. In the latter case, the other party is left without any suitable language in which to express his contentions. (It is like being immobilized in war, by losing all one's transports to the enemy.) What one side regards as undesirable (e.g. "Capitalist Democracy"), becomes a contradiction in terms, a logical impossibility. This may be contrasted with the building of definitions in science: the aim here is to exclude as logically impossible that which all competent observers—whatever their *wishes* in the matter—believe to be physically impossible. Of course the victory of a definition in controversy always rests upon a false claim—the claim that the definition accepted rests upon universal consent. This is never true of controversial terms.

Victories of type (ii) can be seen in many a philosophical, moral, and political dispute. During the Peloponnesian War, as Thucydides relates, the emotive phrase "Courage of a loyal ally" was extended to cover all kinds of reckless audacity, while the prudent hesitation of neutrals came to be described as "specious cowardice." Similarly, since the annexation of Eastern Poland, the Russian word for "aggression" has, according to M. Molotov's statement, acquired a new (presumably a restricted) meaning.

A fuller treatment of the language of controversy would have to show how emotive meanings attached to words are themselves capable of change, and how this change also depends in part upon the selection of certain of the senses of these words, and the exclusion of others. But such changes are also partly effected by enticement rather than argument: thus the Sophistic Movement of the Nineteen-Twenties tried to break down the laudatory connotations of "Reason," "The Intellectual Life," even of "Knowledge" itself, and in this task the poets had a large part:

> I would be—for no knowledge is worth a straw—
> Ignorant and wanton as the dawn.

NEW BOOKS

The Technique of Theory Construction. By J. H. Woodger. (International Encyclopedia of Unified Science, Vol. II, No. 5.) (University of Chicago Press; London, Cambridge University Press. 1939. Pp. vii + 81. Price 6s.)

The title of this admirable monograph may be misleading. Dr. Woodger is not concerned with the technique of how to think of profitable scientific hypotheses (about which, indeed, there is little to be said except that good scientists can imagine them and indifferent ones cannot), but with the organization of a scientific theory, or body of theories, into a deductive system which can be treated by the methods of modern symbolic logic. As a specimen theory to be discussed in this way Dr. Woodger takes a system, containing the relations "is a part of" and "temporally precedes" and the class "cells," which is part of the biological deductive system which he expounded in *The Axiomatic Method in Biology* (1937). He shows how his specimen theory can be symbolized (i.e. expressed in symbols instead of in words, the advantage of this being that variables can be explicitly used), axiomatized (i.e. developed as a deductive system from a few axioms or postulates containing his three primitive ideas), and formalized (i.e. arranged so that the rules governing the formation and transformation of the statements of the theory are explicitly given: these explicit rules form the "metatheory" of the theory). He explains how his specimen theory, like every scientific deductive system, falls into two parts: a preliminary part containing statements of formal logic, and a part containing statements specific to the subject-matter of the theory. In discussing the "metatheory" he emphasizes the important distinction (due to Tarski) between "syntax," which is concerned with the relations of the symbols to one another, and "semantics," which is concerned with the meaning of the symbols. Dr. Woodger expounds his theory in sufficient detail to make clear every logical point, but for the benefit of ordinary readers he does not burden his text with full proofs. At the end of the book he discusses the general principles involved, and adds a charming epilogue describing the place of the symbolic logician in the Salomon's House of Bacon's *New Atlantis*. Dr. Woodger writes so well that I have found only one remark to criticize—where he says that, whereas "constants are signs which have fixed meaning," "variables have no meaning at all" (p. 8). [Surely variables have meaning in that they occur in general statements having meaning.] The great merit of his book as an introduction to modern logical method is that, by taking as a specimen theory one which does not include arithmetic, he is able to avoid the complications which (as Gödel has shown) are necessarily involved in any system including numbers, and which make, for example, Carnap's specimen theories (his "Languages" I and II) such heavy going for a beginner. I heartily recommend Dr. Woodger's monograph to anyone, acquainted or unacquainted with modern symbolic logic, who wishes to understand the technique of deductive-system construction.

R. B. Braithwaite.

PHILOSOPHY

A History of Indian Philosophy. Volume III. By SURENDRANATH DASGUPTA. (Cambridge: The University Press. 1940. Pp. xiii + 614. Price 35s.)

The third volume of Dasgupta's monumental work shows some further development in design, though not so striking as the difference between the first and second volumes, commented on in the review published in this journal, Vol. VIII, pp. 103 ff., and these changes of plan suggest the desirability of examining the preconceptions with which the author entered on his task. He holds the view that in the ordinary sense of the term a history of Indian philosophy cannot be written; the literature consists, not of a series of independent works, each deriving its scheme from general principles, but of a basic text in each system, which is usually expressed very briefly and is explained by subsequent commentaries and super-commentaries; the latter introduce no changes, but merely elucidate the implications of the original more clearly. Thus there is little or no evolution of ideas, or progress in the solution of problems, and the historian is limited for the most part to a survey of the literature, in which he should treat each school as a whole, and is free to use matter of any date indiscriminately in expounding its tenets. This position is doubtless widely accepted in India, where the conviction has always obtained that no doctrines can be considered to be proved till they are shown to have ancient authority in their favour; it is therefore the philosopher's duty to disguise his originality by emphasizing his orthodoxy. But the present reviewer is convinced that thereby serious injustice is done to the greatness of India's thinkers. Admittedly it is true that, once a system was fully elaborated, later commentators are merely of value in accordance with their skill and acuteness in setting out the arguments by which their case is established. The historian, however, is more concerned with problems of growth than with those of stagnation or decadence, and if he accepts this principle, he finds that, though the earlier commentators are at the greatest pains to prove that their own views differ in no respect from those of the text they are commenting upon, they do in fact introduce new ideas and important modifications, at times even with the result of completely changing the complexion of their system. It may indeed legitimately be argued that an orderly course of development can be observed in Indian philosophy, if, instead of treating each school as an independent and self-coontained whole, we direct our attention to the particular problems on which discussion centred at any given period; the history can then be divided into stages, in each of which some aspect of philosophy is predominant and is given a different solution in the various schools. Might not the difficulties of the approach to Indian philosophy be mitigated, if this essential unity were brought out? Unfortunately it would require elaborate and fully documented monographs on individual issues, of which we possess very few so far. In this connection I note signs in the book under review that inadequate use has been made of even such modern literature as does exist. For the time being perhaps no more than the outlines could be traced, leaving the details for later generations to fill in.

Dr. Dasgupta's work must then be accepted on the basis that the title is misleading, and that what he is really attempting is a survey of Indian philosophical literature, a heap of raw material for the future historian to refine. From this point of view he has done much to advance knowledge; a good scholar and a conscientious and industrious worker, he has not confined himself to the printed sources, but, despite grave physical handicaps, he has examined a mass of unedited matter in manuscript and has thereby brought to notice much which no student in this field can afford any longer to ignore. Further, he is a pioneer in forcing us to take into consideration the philo-

sophical side of certain branches of literature, in this volume for instance the Purāṇas and the Pañcarātra texts, which, when properly handled, throw light on developments not to be found in the specifically philosophical treatises. In these respects his work marks a period in research, and however much later writers may dissent from some of his statements, they should not forget their debt to him for enlarging the horizons of their studies. Yet the details are often open to serious criticism, and, as the history advances, the sheer bulk of material threatens to overwhelm him, with the result that his methods of exposition tend to deteriorate, rather than progress, with the appearance of each new volume. In a literature composed almost entirely of commentaries individual points are inevitably handled separately, and their relation to the main issues is usually left obscure. Controversies about them descend into mere dialectics, whose main object is rather to score debating points than to establish a philosophical position. Nevertheless, discussions of this type often have considerable value as illuminating the doctrines of the attacking party, though seldom throwing equal light on the position attacked. But to free the core of philosophic argument from the dialectic shell is no easy matter, and demands much hard thinking. Dasgupta, forgetful of his wise words in the first volume on the difficulty of Sanskrit philosophical literature and (pp. 406–7) on the nature of Indian dialectic, is content merely to transcribe his texts, instead of determining the real effects of the arguments and restating them in more intelligible form. Thus when he wishes in this volume to sum up the differences between the schools of Śaṁkara and of Rāmānuja, he gives us on pp. 304–46 a transcript of sixty-one objections on points of detail from the polemics of Veṅkaṭanātha without any attempt to review the divergence as a whole. For those who know Sanskrit he has made comprehension of this and similar passages easier by more frequent quotations from the original in footnotes; and with a good deal of labour, which ought to have fallen to the author instead of the reader, they should arrive at the essential point. But those who possess little or no Sanskrit will find themselves in difficulties they will probably be unable to surmount.

Turning to the contents of this volume, the central point lies in the efforts of the Vaiṣṇava schools of Southern India to build a satisfactory philosophical foundation for their religion. The earlier schools had all relied to a greater or less degree on the principles laid down by the Sāṁkhya, which were out of date already before the time of Śaṁkara, and when the latter succeeded in making his Vedāntin monism, which left no place for theistic doctrines, into the predominant philosophy of India, the Vaiṣṇavas were faced with the necessity of reconstruction. The solution of the problem was due to Rāmānuja, whose origins from previous Vaiṣṇava thought are properly emphasized by Dasgupta in two chapters on the little-known sect of the Pañcarātra and on the Tamil saints called Āṛvārs (also spelt Alvars in European books). Characteristically enough he is not contented in these chapters with giving a general account and picking out the three or four essential strands, such as the theory of the four *vyūhas* or the doctrine of *prapatti* (here taken as self-surrender to God), but must enter into all sorts of matters which appertain to religion, not to philosophy. After a full account of the school of Rāmānuja a chapter is devoted to the later school founded by Nimbārka, perhaps the best in the volume, and a longer one to Vijñānabhikṣu, a second-rate syncretistic philosopher of the sixteenth century, who certainly did not deserve almost as much space as is given in the first volume to Buddhism. The volume closes with a chapter on the Purāṇas; laudable as it is to draw attention to their evidence, nothing is to be gained from them unless they are handled critically, but this is not the place to discuss how the

problem should have been tackled, and it is sufficient to note here that the failure seems to be due to ignorance of modern research on the constitution of these works. Finally, an appendix to Volume I is added, dealing with the various materialist schools, which has many points of interest, but is incomplete and defective in certain respects.

To conclude, this volume contains a valuable survey of the literature for the schools treated, but it is cast in a form which makes it intelligible only to Sanskrit scholars, and European philosophical students have still to wait for a history which will enable them to appreciate the achievements of Indian thought.

E. H. JOHNSTON.

Morality and Freedom in the Philosophy of Immanuel Kant. By W. T. JONES. (London: Oxford University Press, Humphrey Milford. 1940. Pp. vii + 178. Price 8s. 6d.)

Mr. Jones is concerned with the question: "How can the freedom apparently presupposed by morality be reconciled with the determinism apparently presupposed by science?" He believes that he can get some light on this question from Immanuel Kant. Kant, he tells us, was wrong in regarding freedom as a kind of noumenal causality, but other and more valuable suggestions are to be found in his writings. These suggestions are, he holds, mistakenly interpreted by Vaihinger, Hermann Cohen, and Baumgardt, all of whom agree in rejecting noumenal causality. By an analysis of Kant's moral theory he arrives, modifying much and rejecting more, at the conclusion that moral acts occur when a certain kind of thought (itself the effect of antecedent events in time) "turns practical and is felt as will." By a similar analysis of Kant's theory of freedom he shows that to call practical thoughts "free" means merely that they are of a certain kind, the kind which we call moral. The antinomy therefore disappears. This is confirmed by an independent inquiry (dealing incidentally with the modern principle of Indeterminacy) which finds that the responsibility necessary for morality is present so long as I "feel as mine" examples of behaviour, which, like everything else in nature, are the product of antecedent causes. The kind of thought which, when it "turns practical," becomes moral action is more difficult to describe; but it appears to be based on a feeling of the value of personality and to take as its end personality, or reason, or the acts in which the life of reason is attained. How far all this is from the doctrine of Immanuel Kant can be seen from the further conclusion that "relativism in morals seems really the only position which is compatible with the autonomy of the individual's conscience."

It is hard to see why this dusty answer should satisfy anybody, and still harder to see why Mr. Jones should insist that it is an essentially "critical" answer based on sound Kantian principles. But apart from the conclusions reached we have to consider the value of the book as an analysis and exposition of Kant. It should be said at once that Mr. Jones is obviously a man of ability who has taken a deal of trouble, and that he writes with great vigour and admirable clarity: indeed, it is his very clarity which makes his errors leap so sharply to the eye. He displays upon occasion considerable acuteness, and at times he gets near to some elements in Kant's subtle and complicated thought. Nevertheless I must say that as an expositor of Kant he seems to me to fail. Beginning with the view that Kant is full of inconsistencies, he cannot see Kant as a whole or check one passage by another: instead he rejects central doctrines cavalierly and proceeds to develop secondary doctrines

along wholly impossible lines. To some aspects of Kant's theory, for example the relation between form and matter, he is blind; and, as it seems to me, he twists Kant's views to fit the framework of his own prejudices. When he fails to understand Kant, he attributes to him confusion and inconsistency. Even his use of terms is unfortunate, as when he speaks throughout of categorical and hypothetical acts instead of categorical and hypothetical imperatives, or again when he lightheartedly substitutes the word "end" for the word "law." In the long run he seems to me to turn Kant into an ultra-empirical Aristotelian basing a vague and emotional teleology on what looks suspiciously like a doctrine of moral sense. I hope that he will pursue his Kantian studies farther, and, if I may say so without offence, that he may come to regard this book as a brilliant indiscretion of his youth.

H. J. Paton.

The Place of Value in a World of Facts. By Wolfgang Köhler. (London: Kegan Paul, Trench, Trubner & Co. 1939. Pp. ix + 418. Price 18s.)

Experimental psychologists have very often not been interested in the philosophical questions connected with their science. It is partly as a result of this lack of interest that they have often been contented with a kind of mechanistic theory (such as that adopted by the American behaviourists), which has proved fruitful as a guide to research in the simpler reactions of white rats but which has led to neglect or denial of the more complex problems of human action and thought. This lack of interest in philosophical problems has never been shared by the German experimental psychologists, and particularly not by the school of "Gestalt psychology," of which the most distinguished exponents were Wertheimer, Köhler, and Koffka. All three of these workers are now exiles in the United States, and it was before the University of Harvard that Professor Köhler delivered the lectures in honour of William James which are published in the present book. They form a fitting memorial to William James, and their combination of bold originality in thought with scrupulous respect for scientific facts would have delighted James himself.

It is difficult to summarize an argument as closely knit as that of Professor Köhler. While he is concerned with the philosophical problem of what place can be found for values in the world of fact as displayed by science, it is from the results of experimental research in the fields of psychology and related sciences that Köhler derives his argument for the inadequacy of those views in psychology which leave no room for values.

Unlike many of the other opponents of simple mechanistic psychology, the Gestalt psychologists have never denied the importance of brain physiology to psychology. In the principle of "isomorphism," they have asserted that the characteristics of mental processes are characteristics of brain processes. Their argument is not, however, that mental processes must therefore be as simple as the processes of the brain, but that brain processes must be as complex as we know mental processes to be. The nervous structure of the brain must be conceived not as an arrangement of linear conductors (as in the "telephone exchange" analogy), but as a quasi-continuum in which there are dynamical processes corresponding to the field processes of mental life. It is also argued that there is no reason for denying such field processes in a material structure, since it is just such processes that are studied in modern field physics.

In this book Professor Köhler discusses the conception of "requiredness,"

which is the simplest necessity of any value theory. If requiredness is present in human action, then the principle of isomorphism requires that it must also be a characteristic of processes in the cerebral cortex, and he suggests that it may be found in the physical tensions which develop between the cortical correlate of the self and that of an object. He denies that determination by the future has any more place in psychology than in physics. The physical tensions, if they have any reference to future ends, are nevertheless present tensions determined by the phenomenal representation of the future in the mind at the present time.

Professor Köhler does not claim that these speculations are proved by what we know at present of human psychology. Rather they are the most likely interpretation of the facts as we know them at present which must await fuller verification or refutation by the experimental research of the future. Whatever may be the results of the action of future research on these speculations, they remain a significant and important contribution to the thought of our time.

R. H. Thouless.

Opera hactenus inedita Rogeri Baconi. Fasc. XV. Summa Gramatica Magistri Rogeri Baconi necnon Sumule Dialectices Magistri Rogeri Baconi. Nunc primum edidit Robert Steele (Oxonii e Typographes Clarendoniano. Londini: apud Humphredum Milford. MCMXL. Pp. xxiii+359. Price 30s.)

I regret that I am unable to offer the readers of *Philosophy* a proper review of this fifteenth instalment of the *opera inedita* of Bacon, partly because my reading of the text has been interrupted during the summer by causes beyond my own control, but even more because I have not the minute acquaintance with the grammatical and logical studies pursued in thirteenth-century universities, which is necessary if one's criticisms are to be of any value. I must perforce content myself with congratulating Mr. Steele on the perseverance which has brought him so near the completion of his arduous task, and recording a few suggestions that have occurred to me for the further correction of the text. Of the two works included in the present volume, the first is the more likely to be found entertaining and instructive by the modern reader: the *sumulae dialectices*, which is concerned with the construction of a convenient schema for adjusting the divergent classifications of propositions to be found in Aristotle and Porphyry's *Isagoge*, is likely to be found a rather barren and unedifying waste of labour on a really impossible task. It is really hardly possible to introduce consistency into a classification which is founded partly on grammatical, partly on metaphysical considerations, and to the modern reader nothing can be more repellent than the interminable discussion of "modal" propositions into which the attempt inevitably leads. More curious, if not more profitable, is the attempt in the first of the two treatises to explain and justify the use of a multitude of vernacular or poetic locutions which seem at first sight to involve grammatical solecism. Thoroughly thought out in independence of undue deference to the *dicta* of Priscian, this might have led to the creation of something like philosophical grammar. If Brother Roger makes some interesting suggestions, however, he can hardly be said to have inaugurated such a department of study. Partly, he is too much concerned to vindicate grammatical dogmas taken on trust from Priscian, and partly, like so many of his contemporaries, too ready to adopt the explanation for each individual singularity which seems plausible in the particular case,

without a sufficiently serious attempt to arrive at sound principles of general applicability. Yet his remarks are often shrewd and suggestive, and at least make one feel that the men of his century might have made real contributions to philosophical grammar if only they had been less deferential to one or two "authorities," or had enjoyed some real acquaintance with languages neither derived from nor deeply influenced by Latin.

My observations on the text presented to us shall be made with reference in particular to this discussion of grammatical difficulties. It seems to me that, in this instance and in some others, Mr. Steele has confined himself too exclusively to the palaeographical task of deciphering the no doubt not too legible script of the MS. which he has chosen to follow, without paying much attention to the further questions whether in the particular case his *codex* has preserved the true reading and whether the words as they stand make an intelligible sense. Thus p. 11, l. 16, the words "*alia non eciam* in ratione subjecti" seem to me unintelligible, whereas the rival MS reading *aliquando*, recorded by Mr. Steele, gives just the sense required by the context (which is that the nominative in a proposition stands universally for the "efficient cause and the agent," and *sometimes* also, as in the so-called "absolute" verbs, for the *subject* in which the process denoted by the verb takes place). Page 29, l. 16, "*unitas* debilis per *coalternacionem*." Here, for the last word, the MS. not preferred by Mr. Steele is recorded as having *coadservacionem*. Neither reading makes any sense, but *coadservacionem* at once suggests the true text, which, as appears from the context, is *concervationem* (" the weakened unity" of a mere *heap* or *aggregate*). Page 43, l. 26, *tunc intelligit* subjection. The true reading is obviously that rejected by the author, *intelligitur*. Page 51, ll. 15–16, "veritatis vel falsitatis est *significati* termini repugnans significato alterius vel conveniens." Here again one would think that the rival reading *significatio* must plainly be right. In other cases I seem to remark plain errors due to incorrect punctuation or to confusions between *f* and the "long" *s*, which could have been removed at once by a little more attention to the sense of the author. E.g., p. 1, l. 5, "oratio gramatica aut *sit* mediante verbo." . . . *l.* of course *fit*. Page 56, l. 13, "Neque habet veritatem de se neque per naturam alterius *totius*. *Awt licet*. . ." This is meaningless, "l. . . . alterius. Totum ac[tem] licet. . . ." ("Parts" have neither an intrinsic unity of their own nor a derivative unity. But though the word "whole" signifies a plurality, it stands for a plurality which has a sort of unity.) Page 70, l. 30, "ideo *remanet* hic a preposicionibus." This again is senseless; the true text is that relegated to the *apparatus* at the foot of the page, *removet* (sc. Priscianus), "Priscian here denies this of prepositions." Page 73, l. 29, "(nisi forte) *complectitur sermo*." Again, the reading rejected from the printed text, *compleatur*, is plainly right; "unless, perhaps, the enunciation is *completed*." Page 173, l. 18, "*plura* vero propriorum nullam onaino qualitatemsignificant." l. plura[lia], "The *plurals* of proper names stands for *no* quality." A curious error is p. 196, l. 32, the "singular" non est communem ultis, *l.* of course commune multis. (Oversights of this kind have escaped correction even in the Introduction, where I observe that Auxerre is printed as Auxer*ne*, and Psellus is Prellus). One would not, of course, make too serious a complaint about errors of the kind I have noted in the first printed edition of works like these, were it not that there is never likely to be another text of most of them, and hence the corruption is likely to become the standard "authorized" text of a famous writer.

A. E. Taylor.

The Architecture of the Intelligible Universe in the Philosophy of Plotinus. By A. H. Armstrong. (London: Cambridge University Press. 1940. Pp. xii + 126. Price 7s. 6d.)

In spite of its modest diversions, Mr. Armstrong's essay is one of the most valuable works on Greek philosophy it has been my good fortune to fall in with for some time. Its purpose may fairly be said to be to determine by a careful study of the account given in the *Enneads* "what is living and what is dead" in the philosophical system of the best of the supremely great original metaphysicians of the Hellenic world. Mr. Armstrong brings to his task a close acquaintance with the often difficult text of his author and a very competent knowledge of all that has been ascertained by recent research about the (now mostly lost) literature of the "middle Platonism" and the background of traditional Platonic exegesis presupposed as the foundation of Plotinus's own personal philosophical synthesis. He shows also, in my own opinion, sound judgment in his hesitation to be "wise beyond what is written" in his reconstructions of this now perished material. I am particularly glad to note that his discussions bear out my own conviction that there is a good deal of exaggeration in many of the recent speculations about the supposed debt of Plotinus to the later Stoicism of Posidonius and to post-Posidonian Stoics, and that there is very little reason to look for non-Hellenic influences, commonly lumped together under the vague description of "Oriental," in the thought of the *Enneads*. I feel fairly confident that Mr. Armstrong is right in his contention that in the main the Plotinian metaphysic of the "three hypostases" derives entirely from a superposition of Aristotle's "unmoved mover" and *intellectus agens* upon the Platonic scheme. (Mr. Armstrong's own view is that the Stoic influence hardly extends beyond certain really secondary details of the cosmology habitually presupposed in the *Enneads*, and that the one possible non-Hellenic influence to be detected in Plotinus is a conceivable, though not demonstrable, connection between what Plotinus has to say about λόγος (or λόγο) as a sort of surrogate of mind and soul in infra-human nature and the λόγος doctrine of Philo.) I am grateful also to Mr. Armstrong for his wholly justifiable insistence on the important point that the metaphysical and cosmological tradition is not the source of the whole of the thought of Plotinus: we have also to allow for the very important effect of personal "religious" experience, and it is in particular the inadequacy of formulae surviving from the cosmological tradition to express convictions really based on a vital and personal experience of the "spiritual life" which accounts for the presence of the outstanding self-contradictions which have often been remarked in the *Enneads*. (In much the same way any careful study of Spinoza's *Ethics* will, I think, convince the impartial seeker that Spinoza too had an intense personal spiritual experience which his metaphysical categories only imperfectly translate; hence the impossibility of really equating the God of *Ethics V* with the *Deus sive Natura* of *Ethics I*.)

The conclusions at which Mr. Armstrong ultimately arrives are interesting and highly suggestive. "What is living" in the philosophy of Plotinus for him is the central thought that the world of man and things is "contingent" and derives all its reality from an "absolute" being, which must therefore be at once "wholly other" than itself and yet intimately present to it, a "One" which is thus "beyond being" and "beyond knowledge" in the sense that its being is "other" than that of any of its derivatives, and that while we know that it must be, we do not know *what* it is "in itself," and the relation of the world of things to it is unique and indescribable. The "negative theology" if carefully delimited by these statements is a truth of the first importance.

But it must be cautiously discriminated from two different distortions of itself from which Plotinus himself does not wholly succeed in keeping it distinct; the doctrine that "the One" is unknowable and "beyond being" because nothing can be predicated of it, or again that "it" is unknowable because in it the very distinction between the knower and what he knows is lost. Neither of these versions of the "negative theology" is really implied in the admission of the "transcendent" character of the "Absolute."

What is "dead" in the philosophy of Plotinus is what is more than this existence on "positive transcendence." Dead in particular is the dogma of the "three hypostases" and the attempt to extract a theory of their interconnection out of the metaphor of the overflowing fountain or the radiation of light. Plotinus himself does not succeed in keeping his three hypostases clearly distinct; *νοῦς* and the "One" are often described in much the same language. And *φύσις* again is often spoken of in language which ought to imply that it is a fourth "hypostasis" over and above the three related to *ψυχή* much as *ψυχή* is related to *νοῦς*. And since the relation of complete dependence in which the world of things and persons stands to the "Absolute" is unique, it cannot be made more intelligible by the metaphors of emanation and radiation; Plato was right in never attempting to describe or define *μέθεξις*.

I take it Mr. Armstrong, though he does not actually say so, is fully aware that what is left of the philosophy of Plotinus at the end of this survey is at least remarkably like Thomism. The "positive transcendence" of the "Absolute" seems simply to be the traditional Thomist doctrine that though we can in this life know that God is, we are debarred from knowing what God is, except imperfectly "by the way of analogy." The "uniqueness" of "participation," so far as I can see, is just the mystery of "creation."

Incidentally, I might offer one or two remarks on certain points in Mr. Armstrong's very interesting account of the general movement of thought between Plato and Plotinus. I think that at page 7 there has been some ignoring of the point which has been so fully illustrated in particular by Bignone, that down to the opening of the third century A.D. at least Aristotle was chiefly known to the world by what we now call his *opera perdita*, in particular the *Protrepticus*. These works were expositions of Platonism, and apparently more widely read than most of the Platonic dialogues. Hence it was quite natural that Aristotle should be widely taken for a Platonist, and we can understand at once why a "middle Platonist" like Atticus, who knew that Aristotle was really something different, should insist on the difference with what seems to us undue violence. I might remark too that the "appalling" pun about the etymology of the name Apollo is, at least, no worse than those of the Platonic passage (*Cratylus*, 405*e*) which presumably is its source. It might have been noted on page 10 that four of the names given by Albinus to his "first god" have been directly taken from *Philebus* (65*a*), where "the good" is said to exhibit the three notes *κάλλος*, *συμμετρία*, *ἀλήθεια*; the fifth name, *πατήρ*, is got by identifying the "good" of this passage with the "father and maker" of the *Timaeus*.

A. E. TAYLOR.

An Essay on the Metaphysics of Descartes. By MARTHINIUS VERSFELD. (London: Methuen & Co. 1940. Pp. 192. Price 7s. 6d. net.)

The issue for Descartes is that of bridging a gap which, because of his acceptance of ideas in his mind as an initial fact and because of his method

of doubt—itself an application of the analytic method—he is compelled to maintain as a possibility between ideas and existence. The effort to do this has, in distinction from the content of Cartesian metaphysics, a formal character which it is the main aim of this essay to discuss and which, it is contended, appears primarily in the *Meditations* of which the other works of Descartes are varying versions designed for special purposes. The author patiently deals with Descartes's argument from the assertion of the *Cogito*, with its initial reservations, through the proof of Divine Existence, to the final assertion of the distinction between mind and body and the resolution of the doubt whether the self is or is not corporeal in the sixth meditation. The chief difficulty from the formal side is the circularity of Descartes's procedure, and this occasions a serious question about the basis and rôle of the *Cogito*; in the opinion of the author circularity must be admitted; indeed, is inevitable in any epistemology. Descartes, because of his doubt and his method, is required to philosophize in inverted fashion and has to escape from the circle, inevitable thereby, without doing violence to the demands of the doubt. Rejecting a solution like that offered by M. Gilson, the author holds that the proof of Divine Existence, based on a view of an idea not as true but as an effect and as a mode of existence of that which it claims to represent (the ontological proof being subsequent, and necessarily so, to this proof), justifies both itself and all other proofs and gives escape from the threatened circle without a *petitio principii*. With the help of a twofold guarantee provided by this proof of Divine Existence and by means of the notion of a "real distinction" which the author explains and which, as existing between mind and body, precedes, is required by and is of "tremendous importance" for the proof of the existence of bodies, it is shown that the active faculty forming the ideas of sensible things in the Self must exist in some substance different from the Self since it does not presuppose thought, and thus the fear is finally quelled that thinking may be a property of bodies. The opinion is expressed that the conclusion of the *Meditations* does not have physics especially in view, for they are concerned with the deliveries of the senses and physics dispenses with sense-data (Is this wholly true of Descartes?), and that it appears rather to lay the foundation of Descartes's psychology and ethics.

The author does not attempt a full critical estimate of his subject; he notes in passing difficulties in Cartesianism; he adds, however, in conclusion some criticisms of its defects, traceable mainly to a theory that relations are external—a theory responsible also for Descartes's "egocentrism," though at some points this charge is difficult to reconcile with what is said of his view of an idea as a mode of existence of that which it claims to represent. To say that the essay has the effect of making one sensible of ever more difficulties of Cartesianism is not to detract from its worth; it is a valuable, well-documented and closely reasoned addition to the slowly increasing number of recent works in English on Descartes. Nevertheless, though the author makes several good points, such as his insistence that what is primary for Descartes is not the *Cogito* but an *existent*, namely the Self, it is unfortunate that the reader is left throughout to struggle with some serious difficulties. One concerns the use of the words *truth* and *knowledge* in connection with Cartesianism; truth of ideas is said to be a function of their order, but Descartes is also said to be unable to start from ideas as true, that is, *as representing anything external to them*, and to have on his hands the question whether ideas are veridical; while it is also maintained that distinctions can be made, relations can be asserted, and we can have *knowledge*, even though for instance no bodies exist. A second concerns the method of analysis, the

exact part played by "the natural light," and the nature of and attainment of clearness and distinctness of ideas as a condition of complete assurance of truth—all points which touch on the basis of the certainty of the *Cogito* and of the existence and nature of the Self as well as of Divine Existence. The *Meditations* are said to embody the search for new truth by the analytic method, which is elsewhere declared to be a genuine instrument of discovery; yet Descartes is also said not to be interested in what is novel, to be concerned not with Being but with the problem of knowledge; once more, however, not in the latter for its own sake but in the discovery of the natures of things by an examination of things themselves. It is not easy to find out how clearness and distinctness of ideas on which so much stress is laid are to be attained unless we examine things; but then it is difficult to understand how such examination is possible if we do not know whether things do exist or what is the value of such examination, seeing we can have knowledge even though things do not exist. Descartes is interpreted to the effect that the *Cogito* can be treated as true until an idea is found which though clear and distinct is yet false; but the question arises as to how the test could be employed and how a false idea is to be recognized. The general issue is: with what does the method of analysis, as used in metaphysics, work—ideas or things—and is it a method of discovery at all, whatever Descartes may have thought, or only a method of logical systematization and selection?

B. M. Laing.

Tennant's Philosophical Theology. By D. L. Scudder. (New Haven: Yale University Press; London: Oxford University Press, Humphrey Milford. 1940. Pp. xiv + 278. Price $3; 18s. 6d.)

Dr. Tennant's work has probably not received in British philosophical circles the attention to which it is entitled. It is intensely British, and more philosophical than theological. His *Philosophical Theology* (1928–30) is a large-scale work, and his *Philosophy of the Sciences* (1932) is an important document. His four remaining books are more narrowly theological, and I have no personal acquaintance with them. His retirement in 1938 deprived Cambridge of one of her most determined and hard-headed thinkers. That an American should make him the subject of a monograph is an indication of distant fame. Indeed, Dr. Scudder reports that Tennant's works are now compulsorily read in many of the theological faculties of the United States.

Tennant came to theology through science, and found in Ward a congenial philosophical teacher. The scientific interest has stamped itself deeply on his philosophical work, which has the appearance, and presumably the intention, of sobering theology on the one hand with science, and on the other hand of commending a purified and objectively evidenced theism to scientists. In this country the mediating attempt does not seem to have been widely welcomed by either the theological or the scientific parties, the latter detecting too much religion in it, and the former too little—that is, for both parties it is too philosophical. That philosophers have not given it much attention would require some explanation if they had as a body shown any concern at all with the philosophy of religion; for with this concern they would have had the interesting experience of making contact with a mind thinking in the manner of Locke's *Essay* and of Butler's *Analogy* and of Paley's *Evidences*, with the added weight of modern knowledge.

After an introduction dealing chiefly with historical affiliations and affinities Dr. Scudder writes a long chapter of exposition of Tennant's vindication of

theism, then two chapters of criticism, and finally a chapter in which he formulates for theism a wider basis than Tennant would approve. His criticism turns in effect on three cardinal points of Tennant's doctrine: firstly, that only in sense (inner and outer) do we in cognition come into direct contact with reality; secondly, that in consequence our knowledge of God can only be conceptual, and even so defensible only by an argument from analogy comparable with that by which we prove the existence of other minds than own our; thirdly, and again consequentially, that in such an argument religious experience cannot be allowed to contribute any evidence. The way in which Tennant reaches out from so narrow an empirical basis to what is for him the speculative idea of God is interesting. He contends that our basic interpretative concepts are postulatory in character, and finds in this situation a factor of faith which makes scientific belief at bottom similar to religious belief. The concepts of one's own self, of other selves, and of things as substantial causes of sensory phenomena, are of that kind, posited by the human knower because only with their aid can he make head or tail of his commonest experiences; and when we seek to account for experience, or rather the experienced, as a whole, for Nature regarded both in herself and as suited to the development in man of the aesthetic and the moral life, we are, Tennant concludes, amply entitled to posit further the idea of God by a process of analogy closely similar to that by which we refer very limited sensory phenomena to the activity of other selves.

Each of these points Dr. Scudder takes up at some length, always with perfect polemical courtesy and always with care and insight. His discussion is obliged, by Tennant's basic view that in sense alone is reality presented, to keep largely to the epistemological plane, and for this reason the book could well be used as an informal introduction to the theory of knowledge, lacking the finicalities which make formal treatises tiresome to the ordinary student. He makes out a strong case for the non-inferential nature of our knowledge of other selves, and thus provides support for his own primary contention against Tennant, namely, that religious experience has both a *prima facie* and an argumentatively tenable title to claim direct acquaintance with a "numinous object." The chapter devoted to the examination of Tennant's doctrine that the validity of religious belief is wholly dependent on a concept of God which must be independently proved is a clear and sober treatment of a very difficult subject.

Dr. Scudder's competent study achieves an admirable balance of sympathy and criticism. It deserves to be noted as much for the intrinsic value of the author's own critical and constructive suggestions (though these call for amplification) as for the interest of the system of which it gives an extremely able account.

T. E. Jessop.

A History of Esthetics. By K. E. Gilbert and H. Kuhn. (New York: The Macmillan Co. 1939. Pp. xx + 582. Price 18s.)

This book, the joint product of two American professors, is the fruit of several years' immersion in the literature of aesthetics. Its authors pursue their quarry, in tongues modern and ancient, from the Sophists to Mr. Herbert Read, and their pages are a veritable roll of honour from which not even the humblest theorist is wittingly omitted. A piece of scholarship so painstaking and comprehensive will be a valuable addition to many a university library. By presenting an objective account of the diversity and complexity of reflection on aesthetic problems it avoids the pitfall into which historians

of philosophy have stumbled when they treat their predecessors as exponents or adversaries of their own viewpoint. And I must confess my own pleasure at finding so much space devoted to German writers of to-day and yesterday, because they have always seemed to me the most stimulating of thinkers, and perhaps the most neglected in Anglo-Saxon countries.

Yet may one not ask whether an adequate picture of any branch of philosophical inquiry can be given in 600 pages? One is left with the impression that conclusions are constantly stated without the reasons from which they flow, and that the biggest figures in this historical panorama lose their full stature by drastic epitomizing. But no harm will be done to the exemplary student—if he exists—who always goes to original sources. I must also quarrel with the excessive emphasis on philosophical aesthetics in the narrower sense; in a book of 560 pages the whole development of scientific and empirical aesthetics, from Fechner to contemporary sociologists, psychologists, and phenomenologists, is relegated to the last 40. But I must dissent, above all, from a view that transforms the history of aesthetic inquiry, with all its errors, inconsistencies, and eccentricities, into the corpus of true doctrine that has slowly emerged from the labours of the past. "The meaning of art and the meaning of beauty," these authors write, "are similarly within the dialectic of the whole manifold of philosophical systems and styles." The history of philosophy will surely chronicle the aberrations as well as the advances of thought, and historical studies are valuable just because they enable us to disentangle a corpus of true doctrine, self-consistent but incomplete, on which fresh thinking can firmly build.

LISTOWEL.

The Social Function of Religion: A Comparative Study. By E. O. JAMES, D.Litt., D.D. (London: University of London Press Ltd. and Hodder & Stoughton Ltd. 1940. Pp. xi + 312. Price 7s. 6d.)

Professor James's title indicates the general character of his purpose, which is to consider the moral and spiritual basis of society and to examine the characteristics of the social order from this standpoint. The first chapter, entitled "Providence," argues that the Christian idea of society, as distinct from that of Humanism and Marxism, finds in the providence of a personal God the true basis of human life. Faith in the divine providence creates the idea of revelation as the means by which God's will for the world is made known. This revelation is embodied in sacred literature and tradition. Professor James is thus led to a comparison and contrast between myth and revelation. Then follows the response of man in ritual and worship, in ethics and conduct. What is distinctive and specially valuable in this part of the book is the great store of anthropological knowledge. It is precisely this connection of Christian belief and practice with that of early culture which marks Professor James's treatment from what is usually written upon the subjects which he considers.

The second half of the book examines the social structure built on these foundations which he has reviewed. It begins with a chapter on marriage and the family, and continues with one on Church and community. In the light of the present situation, the chapter on the nation and nationalism is opportune, and one wishes that Professor James had been able to spare more space for the review of Marxism and the totalitarian systems. Professor James's anthropological knowledge makes his exposure of the Nordic myth both brief and convincing. He regards it as a revival of the discredited Aryan hypothesis of the last century. But this myth of sacred blood is as anti

Christian as Marxism. The Germans who frankly adopt paganism may not be numerically many, but the logic of Nazism is with them. Professor James's remarks upon Spain have the added interest that they are the result of a recent visit to that country, which left him with the impression that a minority government was struggling to keep order amongst a series of opposing forces. Outwardly, Fascism did not seem prominent. The Spaniard is an individualist and does not take kindly to regimentation. Professor James, who knew old Spain and has seen post-revolution Spain, does not think that the new is radically but only outwardly different from the old. A final chapter on religion and the modern world leads to the conclusion that religion will succeed in this distracted age only as the expression of the inbreaking on human history of God Incarnate.

This is a timely and useful book, written by a scholar whose reputation is assured. In a certain sense it is surprisingly "orthodox." It is strange that such a sentence should convey, as it no doubt will to many minds, the sense of disparagement. Why it should it is hard to say. We have come to believe, ever since the impact of Darwinism smashed nineteenth-century theology, that progressive thought is necessarily heretical. Hence the flood of undistinguished and froth-weight unorthodoxies which has ever since been in spate. There are signs that at last it is drying up. Fundamentalism is the attempt to immortalize Puritan and evangelical dogma. But that is in no sense orthodoxy. Christianity has a reasoned and reasonable apologia to put forth for those main truths which all Christians share. Professor James has given us an able expression of some part of this. To the philosophy of the Christian religion the idea of incarnation is essential. Against Humanism's worship of man—surely a sorry God at the moment—and the totalitarian worship of the State, Christian society bases itself upon the belief that God was manifest and revealed to man that man might learn to know and follow God. That is wherein Professor James's orthodoxy lies; and, let the critical say what they will, those who cannot accept this may possess a Christian morality, but they must have something less than a Christian faith. This is a book which makes a genuine contribution to the sociology of our day, the more so since it relates sociology, as few other books do, definitely with religion.

E. S. Waterhouse.

An Essay on Nature. By Frederick J. E. Woodbridge. (New York: Columbia University Press; London: Oxford University Press: Humphrey Milford. 1940. Pp. xii + 351. Price in England 20s. net.)

On the jacket of this book it is stated: "Despite the exploratory, discursive and ironic quality of Woodbridge's thought, this is the most adequate expression post-evolutionary naturalism has as yet found and the essay will undoubtedly take its place as a classic statement of an important point of view."

Now, of course, "blurb" is "blurb," but, unless I am sadly mistaken, the "blurb" in this instance was written by a man of understanding, and I would call the reader's attention to something he should take for granted. He should know, if he does not know already, that Mr. Woodbridge is one of America's most celebrated senior philosophers, that he has studied and advanced "post-evolutionary naturalism" (which has certain resemblances to post-Darwinian Spinozism) during a long and distinguished career, and that he has now produced the ripe fruits of these meditations.

The first four chapters deal with Knowledge of Nature; The Visible World; Time and History; The Universe of Discourse (or of inter-communication). Their general theme is succinctly described as follows (p. 331): "So far as the pursuit of knowledge is concerned Nature herself is not a problem. She is the field of knowledge, and as that field she is pre-eminently the familiar visible world. The problems of knowledge are all problems of formulating her coherences."

Developing his theme Mr. Woodbridge has many important discussions on fundamental matters such as his insistence (exaggerated I think) upon the optical character of nature, his account of places in relation to "space," his account of the way in which Nature is "whiled" as well as "expansed." There is also, however, great (perhaps even greater) profit in the incidentals of his discussion; for he has a habit of introducing his weightiest comments with a casual air that one suspects to be very carefully studied. Take for instance (p. 276)" 'There is relentless necessity in Nature' is poetry. Is nothing but the impersonal left by striking out the adjective 'relentless'? What, pray, is the 'need' in 'necessity'?"

I suspect that this method will impress different readers in different ways. If, in the words of the Old Play:

> " Good sense out-subtles subtleties
> And stablishes the deeper mind,"

some may be irritated at being told so quite so often. Others may be unnecessarily puzzled by too much understatement, and a few may be depressed by reading a philosopher who has philosophized himself out of more philosophies than most readers have ever philosophized themselves into. For myself, who am perhaps rather more experienced than some readers, I have to confess that I have some sympathy with some of these complaints. I am relieved that the author is always kind enough to say that his deliberately "instructive nonsense" really is nonsense. There are no traces of caducity in the ripeness of the author's wisdom, and there are no traces of pretentiousness in the book, but I am glad that the author consigned some of his more whimsical parables to the waste-paper basket. indeed more of them, as he tells us, than he allowed to be printed.

The fifth and last chapter on "The Pursuit of Happiness" changes much. I refrain from asking "How much?"

It begins very badly, I think. "Nature *as inclusive* of us, not we as exclusive of her, defines ultimately what morality is" (p. 268)—morality, it appears, being identical with "the pursuit of happiness." That is an empty piece of sententiousness. As the author, recollecting himself, says on p. 318: "One whose experience has not delivered the difference between 'being happy' and 'being unhappy' will never learn from the books what the difference is." Neither will he learn it from Nature with a capital N.

The author's view is that "the pursuit of happiness" raises metaphysical problems, which the pursuit of knowledge, or of the visible, or of history or of co-operative science and action does not raise. In all such cases the knowledge or the action is a natural fact which has just to be accepted, the only problems being the problems of the advance and development of such natural processes. Granting, however, that I am so constituted as to seek happiness, I am led to demand a certain security for this pursuit in a Nature which is indifferent to the said pursuit although I am not. I grope after salvation through a metaphysical need, and if I am saved I have to be saved by faith, which faith "is a justification not of nature but of ourselves." Hence I am led to a genuine not to a spurious problem regarding the sufficiency of naturalism,

regarding a possibly super-natural or sacramental dimension of the universe. *This* ultimate perplexity, it would seem, cannot like the others be gently dismissed by the reminder that we should not apply *to* Nature what we can properly apply *within* Nature. It would seem, however, that Nature has the last word, or so I read this author. "What we find we ultimately need, and what we ultimately want is Nature's complete indifference to our prayers. Our happiness is not thereby made for us secure; but without that indifference, security is left at the mercy of wilfulness and whimsicality."

But perhaps the meaning is that the last and most stubborn of non-natural dualisms remains even when prayers are stilled.

JOHN LAIRD.

The Philosophy of Peirce: Selected Writings. Edited by Justus Buchler, Ph.D. (London: Kegan Paul, Trench, Trubner & Co. 1940. Pp. xvi + 386. Price 16s. 6d.)

Peirce's *Collected Papers* in six volumes puts a certain strain upon one's time, shelving space, and purse. It is therefore a very signal advantage to have this collection of his most important work within the covers of a single, fairly substantial volume. In the matter of time, it is important to have Mr. Buchler's more than competent guidance regarding what is most significant in Peirce's work; for Peirce was repetitious and wayward in his genius, as well as a pioneer fond of adventures. The other advantages are at least equally obvious. In short, Mr. Buchler's is a most useful enterprise. With the exception of some half-dozen pages, all that is printed here comes from the *Collected Papers*; but the twenty-eight papers that comprise this book give us both the range and the nicety of Peirce's lifework.

Since Mr. Buchler, in his *Charles Peirce's Empiricism*, has already published an admirable exposition of Peirce's philosophy, he confines himself in the present volume to the minimum required of a first-rate editor. He supplies a short Introduction, some necessary notes, and a full index. The introduction tells the reader all that he needs to know before he sits down to read, explaining why Peirce's posthumous fame was so very well deserved, how he genuinely advanced "scientific method in philosophy," how American philosophy, with him, "flamed into startlingly sudden distinction." We should all be very grateful to Mr. Buchler.

JOHN LAIRD.

Revelation and the Unconscious. By R. SCOTT FRAYN, B.A., B.D., Ph.D. (London: The Epworth Press. 1940. Pp. 240. Price 10s. 6d.)

This is an exceedingly able and well-written study; although written from a different angle, it is reminiscent in many ways of Theodor Reik's *Surpreis and the Psycho-Analyst*. Its theme is the emergence of significance in human thought and personality; and the author has so aligned himself with his subject as to achieve a really significant treatment of it. The essay is frankly critical and speculative; it is well documented and carefully reasoned, and yet contrives to rise to almost epigrammatic heights of happily turned and illuminated phrasing.

The theory of antithesis between a good "superconscious" and a bad "unconscious" is rejected. The author prefers to postulate a single unconscious mind with two phases; there is a deeper or primordial phase, as seen by Jung, and a less deep, secondary or repressed phase, as seen by Freud.

The deeper phase is conceived as being in touch with spiritual influence and revelation flowing up from the ground of our being in God; the secondary phase is distorted by conflict between conscious and unconscious elements, and by the presence of repression, due both to refusal of the developing conscious and to failure with the developing consciousness when it is accepted and exercised.

In the matter of repression, he throws much of the onus back on to the conscious mind for its failure to assimilate the material provided; and he restores to the conscious some of the dignity which it has lost through the psycho-analytical stress on the unconscious. (After all, he points out, it is the conscious which has discovered the unconscious!) He draws attention to the intermittency of consciousness (p. 57), and holds that there is a sense in which consciousness itself is repression.

The book discusses matters which are fundamental alike to psychology, philosophy, history and religion, and brings them to a common meeting-ground. The preliminary incubation of revelation in the masses of a nation, its temporary embodiment and obscuration in ritual, its emergence in singular behaviour and in the meteoric personalities of leaders, and the need to re-integrate these leaders and their revelation into the general structure of thought and society—these are the living foundations of human thought and action in all ages, but man is slow to achieve an objective view of them, and Dr. Frayn's book is a notable step forward in the pursuit of this detachment. Central in his thought is the idea of the inspired individual as the incarnated reality more truly expressive of revelation than any work of art or body of teaching; he sees all these significant personalities as partial, yet individually complete, incarnations of the Christ. "Leaders often fail," he says, "in proportion as they succeed. Often as the incarnation of the superficially collective unconscious, success is within their grasp. Wholly surrendered to deeper control, they may fail. The ground-plan of Calvary is the mysterious scheme of complete surrender to the will of God. The true revealers come and go with the tragic swiftness of meteors, but the politic reformer may remain to twinkle in a cold constellation of fixed stars."

He illuminates everything he touches, whether it be the question of the tension between the individual and the group, the origin of religion in racial memory and tragic primitive emergency, or its utilization as a dream-escape from any real response to these stark realities. But, whether intentionally or not, there appears to be one significant omission in an otherwise unusually complete thesis; he does not at any point discuss mutuality of relationship between man and man as a medium for the emergence of revelation, whether in such free and consecrated groups as those of the Society of Friends or in the friendship and love of private individuals. That such mutual reinforcement of consciousness is a living reality, I am sure he would not deny; his dedication of his book to Kathleen and Joan, and his continuous and gracious reference to the work of his fellows in the same fields of thought, bear subconscious testimony to his attitude; but one could wish that he had drawn it fully into consciousness as a part of his argument. The book had its origin in the devoted labours of many widely separated contributors to knowledge; the author has drawn them together into a new and significant grouping. I would commend his work especially to priests and psychologists; to some it will come as a breath of life, to others almost as a sentence of death.

The Epworth Press deserve congratulation on having produced such a dignified, pleasing, and easily read volume.

B. D. Hendy.

The Secret of Pascal. By H. F. Stewart. (Cambridge: University Press. 1941. Pp. x + 108. Price 5s.)

Mr. Stewart is an admirer of Pascal, as are most of those who have made any study of this incalculable genius whose personality still attracts and irritates, and all the while defies analysis. That is why one entertains a doubt at once whether this or any book is likely to yield the secret of Pascal. Mr. Stewart, who has previously written upon the subject, now limits himself to Pascal as a debater, moralist, and poet. He thinks that somewhere amongst these aspects the secret lies, but when it is out, and we learn that it is the unsurpassed literary qualities of Pascal's work, we may still remain unconvinced that the whole secret is told. None the less, there is much for which to be thankful in this modest little essay. For one thing it is fully documented, admirably supported with apposite quotations, and clearly the work of a close student and sympathetic critic of the great Jansenist. But when we think of a man who, in a brief life of 39 years, was at once scientist, inventor, theologian, polemist, lover, mathematician, mystic, philosopher, and saint, a man who amongst all these things can claim to be the pioneer of public omnibus services, one is left quite unconvinced that, outstanding as his literary gifts were, the secret of Pascal lies in them alone. Is it not rather in the amazingly manifold personality of the most many-sided genius who ever lived that we should seek for it? Ten men met in one personality with all the inconsistencies which such a combine necessitates. Pascal died in the arms of orthodoxy, yet no one knows whether he was even to the last a Jansenist. Only after his death was it known that he was "Louis de Montalte," author of the *Lettres provinciales*, and the Jesuits, bitterly attacked in them, failed with all their attempts to discover the author. Is not the secret of Pascal to be found in the fact that when we have read and studied him from every angle, we are still bound to confess that we have not placed him in any category where we can leave him? The secret of Pascal is that of an unsolved problem which calls us to another and yet another attempt to solve it. But if one disagrees with Mr. Stewart in this respect, it may at least be admitted that he has in this little book given the student of Pascal fresh ground for thought.

E. S. Waterhouse.

Heaven Wasn't His Destination. By William B. Chamberlain. (London: George Allen & Unwin, Ltd. 1941. Pp. 216. Price 8s. 6d.)

One is grateful for an account in English of Ludwig Feuerbach and his philosophy, since information regarding this rebellious Hegelian is almost wholly limited to books in German. The title cannot be called a happy one. Those who want to know about Feuerbach need not be lured by a journalistic touch of this character, and to those to whom the title may conceivably appeal, the contents of the book may not appeal. None the less, despite this jocosity, and a few similar touches, including a quotation from a "comic strip" character, named Popeye, the book is a serious and interesting attempt to explain and affiliate Feuerbach's philosophy. Mr. Chamberlain tells us that Feuerbach was important, and this is why. "He told us that we ourselves have made our gods; that the emotions which we thought were divine emotions are human emotions; that the lumps in our throats which we thought were transcendently produced are really produced by our next-to-highest nature, our highest nature being the comprehension of our next-to-highest. . . . He told us why we should turn away from the vanity of preoccupation with another world. This world is all." There is not a single thing here which

was not said by the sceptics of the pre-Christian era. If this were all we should not need to disinter this forgotten thinker. Actually, the interest one finds in Feuerbach is that he was a link between Hegel and Marx, a bureau of exchange by means of which the coinage of Hegel's spiritual dialectic was transferred to that of dialectic materialism. Mr. Chamberlain writes for the "philosophical materialist," and proves that materialism as well as Christian theology can produce fundamentalists. Indeed there is nothing in these pages to suggest that materialism is not in the happy position it was when Feuerbach died in 1872. Like other critics of Christian teaching, Mr. Chamberlain makes his own ninepins, labels them "orthodoxy" and throws them over with a flourish. For example, he says, "One of the fundamental tenets of orthodox Christian theology is that the unwedded or ascetic life is the way to the heavenly." It would be interesting to know what constitutes "orthodox" theology in Mr. Chamberlain's view. It is somewhat curious that Mr. Chamberlain should quote Feuerbach's definition of God as pure unlimited free feeling without any reference to Schleiermacher, since in other respects he seems anxious to relate his hero to his contemporaries. Or here is a sentence that defies analysis: "Pedagogically speaking, Feuerbach was that naïve; Marx on the other hand was not." But despite such blemishes, the book was worth writing and is worth reading. Mr. Chamberlain is an admirer of the ideas of Feuerbach, and if at times that warps his judgments it has at least the merit of threading a strand of enthusiasm throughout the book, which will certainly have the effect of making the reader better aware of Feuerbach's philosophy, whether or not this acquaintance makes him like it better. But it is a pity that Mr. Chamberlain felt called upon to support Feuerbach's position regarding immortality by extensive quotations from a writer who out-dogmatizes the most dogmatic of theologians by declaring that the verdict of science, psychological, physiological, biological, and medical, is clearly in favour of the belief that personality and body are inseparably one, and that this is a disproof of immortality. Such stupidities, brandished in the name of "science," may impress Hyde Park on a Sunday afternoon, but form a needless blemish to what, in many respects, is a careful and stimulating study.

E. S. WATERHOUSE.

Law and Love: A Study of the Christian Ethic. By T. E. JESSOP, Professor of Psychology and Philosophy in the University College of Hull. (London: S.C.M. Press. 1940. Pp. 186. Price 6s.)

Professor Jessop has written provocatively, some will say provokingly, but his main thesis is right. It is that the common ideal of goodness as devotion to duty, the primacy of will over desire, the ordinary standards of the average Church member, are non-Christian, sometimes even non-humane. He sets himself to prove that by a couple of chapters on the goodness of goodness and the badness of goodness! The rest of the book is an analysis of the Christian distinction between the loving and the loveless and the characteristics of love as Christ saw them. This valiant attempt to bring back the Galilean strain into Christian ethics deserves notice. One sentence gives the gist of its contention: "Although we are not content with our (Christian) practice, we are content with our ideals." Professor Jessop thinks there is too much of the Stoic in our conceptions of duty. We have exchanged the outward legalism of the Pharisee for the inner legalism of the Stoic. Reading what Professor Jessop says, one is reminded of some words of the late F. C. S. Schiller: "Religions are created by exceptional men for whom spiritual

things are intensely real; but they soon get watered down, discounted, and adapted to the needs and outlook of the ordinary man for whom the spiritual world is normally a half-belief." Is Christianity any exception?

If Professor Jessop returns to this subject—and this book by no means exhausts it—something of the negative side would be valuable. For example, is the usual Christian conception of what constitutes a sin any more directly related to the outlook of Jesus than the idea of goodness which is here subjected to criticism? In what is here, however, we have a valuable analysis by a philosopher of repute, who is fully sympathetic with Christian values, of the extent to which the Christian community has grasped the implications of its Leader's ethics. It deserves and should have respectful attention.

E. S. Waterhouse.

Time and Time Again. By E. M. Rowell. (London: George Allen & Unwin, Ltd. 1941. Pp. 269. Price 7s. 6d. net.)

This pleasantly written collection of essays ranges over a wide field embracing topics as varied as time and the self, knowledge and religion. I shall limit my remarks to a few comments on the author's views about the aesthetic side of experience. Art he regards more as a kind of communication than as a kind of self-expression. This is a useful and interesting viewpoint, though a certain lack of serious psychological equipment prevents a satisfactory demarcation between art and writing or ordinary speech. But in dealing with language conventional and poetic there is an obvious fumbling and groping after the right distinction. Perception is practical, and snatches after things, whereas the artist's attitude is contemplative, an absorption in the object that borders on the mystical communion between self and not-self. So far so good; but an artist is not necessarily religious, and the nature lover is not necessarily an artist. But if there is much that can only be worked out in book form, the essay conveys quite adequately the aroma of a fastidious taste and the influence of a delicate perception of values.

Listowel.

From Beast-Machine to Man-Machine. By Leonora Cohen Rosenfield. (New York: Oxford University Press. 1941. Pp. xxviii + 353. Price $3.50.)

Descartes, on the basis of his philosophical distinction between Mind and Matter, proceeded to assert that the human body and animals were merely machines; and in doing so he started a controversy which was vigorously carried on throughout the seventeenth and eighteenth centuries, culminating in La Mettrie's theory of *L'homme machine.* It is a controversy that has been neglected; yet apart from its providing a topic for French *Belles-Lettres,* it is one that is of considerable interest to philosophers and of importance to the historian of ideas, and is not at all the barren thing that one might be apt to fear. The controversy raises far wider issues than those questions which were immediately discussed. There were of course humanitarian considerations involved, namely concerning the treatment of animals; there were religious matters at stake, these very often determining even in the ranks of the Cartesians the particular view adopted. The general philosophical issues were the nature and possibility of an animal psychology as distinct

from a mere mechanical physiology, the range of mechanism in the universe, the place and status of man and animals in the scale or chain of Being.

Mrs. Rosenfield in the present volume not only presents the views of prominent and already well-known writers in France on these issues, but unearths and revives an array of others, some English and some Netherland and even German ones who were closely connected with the French controversy. The exposition is accompanied with a wealth of references, and the modern reader is enabled to take part once more in what was formerly a lively, though now forgotten, dispute. Yet it is a dispute that is still going on to-day, not in the biological sphere alone; and Mrs. Rosenfield's work unveils in one more region the fact that the eighteenth century was already raising and shaping the prominent issues of the future.

B. M. Laing.

Consider the Lilies. Being the second part of "Edifying Discourses in a Different Vein," published in 1847 *at Copenhagen.* By S. Kierkegaard. Translated from the Danish by A. S. Aldworth and W. S. Ferrie. (London: The C. W. Daniel Company, Ltd. 1940. Pp. 71. Price 4s. 6d. net.)

These belong to a group of discourses of Kierkegaard's later period. The first impression they make is of a quiet, almost effortless, flow of meditation. Gone are the torturing antitheses, the enigmas of "indirect communication." Yet, when we listen more attentively, they seem like a slow movement in a minor key, which has in the background the stress of the movement of which "Dread," "Christianity a Radical Cure," "Choice," formed the motifs. We have here a spontaneity and freedom which spring from having faced an inexorable demand. The Lilies and the Birds are free with an unreflecting spontaneity. Their company meets our condition when we are anxious—they do not reproach us or make us feel they are drawing invidious comparisons, as people will do even in their would-be sympathy. But "Why has the bird no material care? Because it lives only in the moment, because therefore there is nothing of the eternal in the bird; but is this to be called a perfection? How, on the other hand, arises the possibility of material care? Thus, that the eternal and the temporal come together in a consciousness." How can man, with his consciousness bringing anticipation of the future and the sense of responsibility, learn to "be not anxious for the morrow"? How can he, on his level of self-consciousness, capture that "immediacy after reflection" which was Kierkegaard's description of faith? Perhaps Kierkegaard can see further than most into this, since it was given to him as to few to hold in his grasp the ambiguities of the Gospel, to consider the seriousness of the eternal and the prodigality of flowers and birds.

Dorothy M. Emmet.

Principles of Economic Sociology. By D. M. Goodfellow. (London: George Routledge & Sons, Ltd., 1939. Pp. xx + 289. Price 12s. 6d.

In the last two years a renewed interest in the application of economic theory to the material produced by anthropologists has resulted in several useful publications. Of these Dr. Goodfellow's book is the most consistent in argument and in many ways the most stimulating. His analysis is free from the technological details of craft-work which obscure and even substitute for the treatment of "primitive economics" by most writers who purport

to tackle the subject, and his conclusions consequently should command the interest of economists as well as of anthropologists. At the same time the title of his book reveals the importance he attaches to the need for examination of economic data in their specific social setting, and thus offers a corrective to some of the factual assumptions made by economists about human behaviour.

Beginning with a demonstration that the essential body of economic theory is applicable to the field of "primitive" institutions, he proceeds through an analysis of economic choice and economic value to an examination of the disposal of resources in Bantu society. The general problems of ownership, economic management, utilization of the agents of production, the attribution of economic shares, the formation of market "prices" and the evaluation placed upon consumption activities are considered, and this is followed by analysis of the economics of specific institutions and social units, both in Bantu society as a whole and among selected tribes. The method followed is that of equilibrium analysis, pursued with a rigour hitherto foreign to anthropological theory.

In conclusion the author takes up again a thesis briefly examined in the earlier part of the book—that the division between Public Economics and Economic Theory is invalid, and that in a sense all economics is part of public economics. He argues that the assumption that all economic decisions are made by individuals, though justified by its simplicity at some stages of the study, is too far removed from actuality to allow economic generalizations to be given real content. Following on this he points out that interpersonal comparisons of utility—a bogey to economists at present—are in fact made continually in practice since most economic decisions are made by group executives, whether of the family, the State, or some intermediate organization.

The main defects of the book are the slow pace of its argument, and the concentration of attack mainly on De Viti de Marco, whose propositions hardly merit the lengthy and exclusive analysis here given to them. Perhaps a clue to some of the repetition which wearies the reader is to be found in the remark (on page 270) that "the object of this paper" is to combat the tendency to rule out interpersonal comparisons from economics. This suggests an incomplete synthesis of material offered for discussion at various times before being welded into book form.

But the book as a whole is an analysis of great value in a field of anthropology that has been too much neglected; it is also a definite contribution towards a more unified approach to the study of sociological data.

RAYMOND FIRTH.

Essay on the Foundations of Aesthetics. Analysis of aesthetical form. By F. H. HEINEMANN. (Paris: Hermann et Cie. 1939. Pp. 49.)

This thoughtful essay is an amplification of a paper read to the Second International Congress of Aesthetics in 1937. Its sub-title, *An Analysis of aesthetical form*, gives the clue to the author's method. Analysis of meaning, fruitful in every branch of philosophical enquiry, becomes in aesthetics an analysis of the forms with which aesthetic phenomena are invested by man or nature. The word "form" is used in the technical sense derived from Aristotle by the Mediæval Schoolmen, and like them he qualifies it by epithets to distinguish its main varieties; *forma formans*, *forma formata*, and *forma se formans*. These distinctions, though scholastic in terminology, are based on

vital differences in the realm of fact. *Forma formans* is the conscious and deliberate purpose of the artist, *forma formata* the material product in which this purpose issues, and *forma se formans* the unconscious processes which mould the beautiful in nature. But the artist, too, is nature, and in so far as he creates spontaneously he exemplifies the sort of activity that underlies the physico-chemical changes of the material world. Finally, harking back to Schopenhauer's four types of the principle of sufficient reason, he adds another as yet unexplored, the ratio apparendi or *Erscheinungsgrund*; in passing he rightly reminds us that the English "reason of appearance" indicates the concept only and not the actual causal relation. He means by this that aesthetic phenomena belong to the order of perceptual appearance, and not to the scientific realities of mind or nature.

It is admittedly important that the field of aesthetics should be defined as a preliminary to the business of detailed analysis, and Prof. Heinemann has covered most of the ground despite his somewhat cumbersome scholastic terminology. He has done a service by showing that aesthetics cannot be founded on the vague and narrow expressionism of Croce. But it is curious that a German writer should have nothing whatever to say about the views of such interesting contemporaries as Dessoir, Volkelt, or Geiger, to name some only of those mentioned by E. Meumann in his *Einleitung in die Ästhetik der Gegenwart*. And the scientific value of an aesthetic based on his principles would be limited by a refusal to employ methods of enquiry—psychological, sociological, art historical—commonly used by other writers. The relegation of aesthetic experience to the realm of perceptual appearance goes back to Schiller and Hegel; but the vital point is surely the difference between perception in general and perception at the artistic level, a distinction not adequately stressed by the author of this pamphlet.

LISTOWEL.

Proceedings of the Aristotelian Society. Vol. XL. 1939–1940. (London: Harrison & Sons, Ltd. 1940. Pp. xviii + 265. Price 25s. net.)

This volume maintains a high level of widely diversified interest. The Presidential Address is an illuminating and critical survey of Aristotle's Logic, which Sir David Ross regards as the foundation of all later Logic, although it also "involves an appeal to something more intuitive than the reasoning process" and, while making pure theory subordinate to practice, escapes Pragmatism.

Dr. Joad reiterates the familiar "Appeal to Philosophers" to deal primarily with "topical concerns," at the same time eschewing any merely "topical attitude," rather than fiddle, while Rome burns, with "analysis of the meaning of sentences." To what extent the other contributors escape the implied censure is an extremely interesting question. In any case, Dr. Ewing claims that his own trenchant criticism of Linguistics is "of great practical importance," while Miss Lion warns us that "intellectual pragmatists" are largely responsible for the reigning chaos. Dr. Acton, again, insists that historians can never ignore "the moral attitude to politics," and Mr. Hannay submits five principles which intimately affect the relations between Morality and Religion.

Prof. Campbell's discussion of Will stresses both Psychology and Effort, with special reference to theories advanced by McDougall, Stout, Thouless, and Wisdom. But it seems questionable whether willing, as such, can ever be actually effortless, however closely it may approach this low mechanical

level.[1] Apart from this important point, he argues for the uniqueness of volitional effort, together with its creativeness and freedom from "character"; but cannot this final paradox be avoided by the adoption of the principle of Self-determination, in virtue of which "character" transforms itself for good or evil?

Mr. Kneale has succeeded in infusing fresh interest into problems of Substance. Commenting on Earl Russell's inconsistencies, he concludes that substances actually exist, in the form of "continuants" assuming the level of Mind. There is, undeniably, much substance in his own contentions.

Mr. Whiteley's treatment of Perception appears to me to be somewhat confusing; it seems difficult to harmonize his assertions that "sensory qualities are qualities of a sensation" and also of the experience of sensation, but never of substances, and at the same moment "ways of feeling," while sensation itself, still further, is a process and likewise an "object of apprehension," but "not an apprehending" although this is clearly a process.

Reverting in fuller detail to Dr. Ewing's opinion of the current disparagement of Reason as threatening disaster, he suggests that "*a priori* propositions and deductive reasoning give us new information about the real," while Linguistics fails to account for Deduction. This is all the more significant in connection with Eddington's recent emphasis on the inherently deductive aspects of all scientific theory.

Equally pertinent is Miss Lion's Paper on "Sovereignty," in which she advances the closely associated principles that Metaphysics is unavoidable, while no State can now exist apart from some international organization which, in its own turn, necessitates certain "sacrifices of sovereign rights." Closely allied with this standpoint is Dr. Acton's insistence on the value of historical knowledge combined (to repeat) with the retention of the moral attitude to political problems.

Mr. Hampshire's analysis of the recalcitrant difficulties of Meaning, even if less conformable to Dr. Joad's criterion, is all the more important in view of Earl Russell's recent *Inquiry into Meaning and Truth*. He also believes that logical syntax has absorbed too much attention, thereby obscuring more fundamental features and generating "metaphysical muddles." Seeking to interpret Berkeley, he concludes that "any philosophical theory of language in which propositions are said to correspond to facts must be misleading."

Finally, Dr. Katkov's closely argued discussion of the connection between "The Pleasant and the Beautiful," while omitting Art as such, unreservedly recognizes the necessity of a consistently formulated aesthetic theory.

J. E. Turner.

Man the Measure. By Arthur Hazard Dakin. (Princeton: Princeton University Press. London: Humphrey Milford, Oxford University Press, 1939. Pp. xiii + 284. Price $3.00; 17s. 6d.)

Mr. Dakin, already the author of a volume on the religious philosophy of Baron von Hügel, has written a book to expose the barrenness of that loosely defined movement to which in North America the name "Humanism" is given. This sadly overworked word is used, in this context, to refer to a curious pseudo-religious movement in the new world which, while divesting itself of old-fashioned clap-trap (such as belief in God), still proclaims the comforting assurance that man is moving "on-and-on-and-on-and-up-and-up-and-up."

[1] Cf. "Every cognition has . . . conative effort as a factor." Sherrington, *Man on his Nature*, p. 288.

To write this book Mr. Dakin has had to wade through a turbid flood of fifth-rate thinking which might well have appalled a less hardy and patient man. On this side of the water he finds the principal exponents of analogous views in Bertrand Russell and Julian Huxley. The former of these has expressed so many opinions on these subjects, without undue regard to their mutual consistency, that it is of little profit to refute him in his "Free Man's Worship" phase; while the latter's theological dabblings (notably *Religion without Revelation, 1928*) are of less interest by far than his proper business of Zoo Man.

In the United States humanism has erupted as a cult with all the paraphernalia of priest, church and creed. Within the movement differences of many kinds emerge, but it appears to be united in the desire to secure upon a naturalistic foundation ethical ideas which have sprung from non-naturalistic faiths. They are also at one in an optimism concerning man's essential goodness which the last war did not damp, and which looks as though it may survive the present superficial unpleasantness which has momentarily overcome him.

Mr. Dakin's standpoint, as might be guessed, is that of a convinced theist. He is deeply imbued with the spirit and the method of his great master. His master's style, however, he might more firmly have eschewed; for constructions just permissible in the one become scarcely pardonable in the disciple. The author—after some preliminaries—considers in order humanism and scientific method, psychology, practical ethics, speculative ethics, and religion. In each of these fields he has little difficulty in showing how shoddy is the texture of this latter day variant of the Protagorean thesis. He concludes with the observation, "Their good humanists have taken from others but made it no better. Their bad they have borrowed also and by misuse made it worse."

RALPH E. STEDMAN.

Psychology, Psychotherapy and Evangelicalism. By J. G. McKENZIE, M.A., B.D., D.D. (London: George Allen & Unwin, Ltd. 1940. Pp. xiii + 238. Price 10s. 6d. net.)

Professor McKenzie begins by reminding us that religion is an experience and not merely a belief. "Beliefs are not the foundations of the religious sentiment, nor do they create religious experience. It is the experience that is creative. All experience involves a cognitive reference; but the experience may be real while the reference is false" (p. 2).

He goes on to make a critical psychological investigation of the religious experience known as Evangelicalism, an experience which is primarily that of relationship of a personal kind with a Being who is more than human. This experience is described in terms of personal Salvation, involving Conscience, Conviction of Sin, Conversion, Forgiveness, Atonement, Grace, Faith, and Sanctification. That this experience is not only real but vital and crucial is the author's considered testimony. He quotes Macmurray[1] as admitting that science, in spite of the benefits it confers, cannot save the world, since it must serve and cannot lead: and he holds (p. 11) that the motive of abstract rationality can inspire no great compelling system of morality, and that it is through the religious attitude to life that the will becomes most strongly organized. He stresses (p. 15) the fact that all neurotic conflicts have a spiritual factor which is not recognized in the Freudian topography of personality and that there is more involved than a conflict between the Ego and the

[1] John Macmurray, *The Structure of Religious Experience*, p. 10.

Id. "The theologian should resist the tendency to draw theological conclusions from premises based on psychology or any other science. . . . Man as self-conscious being has tendencies other than biological which the biological can never explain. . . . Religion is rooted, on man's side, in the nature of self-consciousness. . . . It belongs to man as personality; and thus it would seem to us that theology must always remain metaphysical" (p. 43)

He brings forward a most useful elucidation of many psycho-analytical terms which in spite of all that has been written about them still needed clearer definition from the philosophical point of view. He clarifies the concepts of the unconscious mind, of repression, and of ideation: "We do not think ideas, we think with them." He gives an equally valuable analysis of concepts in the evangelical field, such as Conscience, holding with Professor Broad[1] that Conscience is conative, and further, that it is distinct from the moral sentiments and "thinks with them," being the innate tendency to co-ordinate and regulate our moral ideas and conduct. I do not recall having met anywhere a more lucid, informative and comprehensive analysis of the moral nature of man than is contained in this book, or one which better succeeds in co-ordinating physical science, psychology, and theology, illuminating them all with a light derived from that Spirit by which they find their integration. In fact, one hardly knows whether to commend the book more for its philosophical clarity, its psychological accuracy (clearly based on experience), or its moral and religious authority.

While the author points out that there is a danger of confusing religion both with the study of religion and with the experiencing of mystical states of consciousness, he justifies (p. 76) those who find their evangelical experience in the external relations of thought, holding that such sustained interest in philosophy or theology is a religious experience and not merely a substitute for such an experience.

There will be many "modern" thinkers who will dispute his emphasis on the reality of Sin, and on the corruptness and need of conversion of the human heart and of the self-conscious being of man; but I doubt whether these will include many who have had the author's opportunities of coming to an intimate knowledge of the nature of man through the practice of psychological analysis. He is fully in line with the psycho-analytical theory of the unconscious in declaring (p. 132), against the convictions of many "religious" people, that "sin has no biological roots," but that these are spiritual and grounded in the heart of man. On page 145 he helps to clear up another popular misconception as to the nature of the Divine Love, bringing about a satisfactory integration of the concepts of Holy Will and Holy Love, and portraying a Divine character which is equally capable of reacting against moral evil with unmitigated force and, at the same time, of forgiving the repentant sinner. In his discussion of these matters, he may be said to put both psychology and religion on a new footing relative to each other, and to open up to both of them much wider fields of understanding and effectiveness. If, as seems likely, the evolution of mankind is taking a new turn away from mechanistic and materialistic views of life, and if we are to avoid the contrary dangers of unregulated mysticism, books such as this will be increasingly in demand as definitive guides for those who wish to take a conscious share in the advance. One wishes, however, that there could be found a more attractive word than "Evangelicalism" for the powerful and attractive reality of which Professor McKenzie writes.

I hope none will assume that because he roots Sin in the empirical ego, as distinct from the soul or Subject, the author is implying that the empirical

[1] C. D. Broad. Article in *Philosophy*, April, 1940.

ego is intrinsically evil; it is surely a question of whether the consciousness is identified with the ego or with the biological self, or whether it is centred in the "non-ego nucleus" of Jung, the supra-personal Soul.

Little has been known in modern times, except by spiritual counsellors, of the science of the heart of man; and it is not surprising that we are at present living out the painful consequences of our ignorance. I commend Professor McKenzie's book to pastors, psychologists, philosophers, humanists, and all serious thinkers.

B. D. Hendy.

The Social Role of the Man of Knowledge. By Florian Znaniecki. (New York: Columbia University Press. 1940. London: Humphrey Milford, Oxford University Press. Pp. 212. Price 2 dollars 50; in England 16s. 6d.)

Whether or not sociology is a science there is certainly interest and profit in considering the place, status, and functions in any society of those who have or are believed to have some "knowledge," together with the allied question of the influence of actual or presumed social requirements of this kind upon the outlook and attainments of the "men of knowledge" themselves. Professor Znaniecki addresses himself to this task, and I think he makes a success of it despite a certain lack of incisiveness in expression and despite a certain fluidity of method.

Professor Znaniecki doesn't tell us much about himself, but from his references to Poland and other indications one gathers, perhaps wrongly, that his thought moves most easily from the Poland of a few years ago to America and back again. In any case, he thinks principally of technologists and of sages, the technologists being either pioneers in a relatively undeveloped economic régime or the directed personnel of big business, and the sages being the sort of people who behave like mandarins or the Catholic priesthood in the days when sacred and secular culture were supposed to be almost the monopoly of that priesthood.

A long chapter entitled "Technologists and Sages" is particularly interesting regarding the problem of the relations between technological experts and technological leaders. It proceeds to discusss inventors, common knowledge, and the place of developed science, both technical and cultural, along with the place of the "diminutive sages" who are educators and publicists. A still longer chapter on "Schools and Scholars as Bearers of Absolute Truth" examines the structure of a highly developed scholarly craft, having its origins in the supposed social necessity of sacred lore and later devoting itself more and more to the orderly presentation of "objective" truth in a carefully planned system with very exacting standards of professional competence. The interest of the discussion is largely due to the fact that the author's idea of a typical "scholar" of this kind is based upon "the organization of scholarly roles stabilized in Poland during the period from 1919 to 1939," where there were five distinct stages, none of them short and all nicely graded, before the scholar could become a professor, ranking immediately below an under-secretary of state and equal to the governor of a province or a brigadier-general.

In the last chapter the author examines the place of the "explorer," and believes he can discern a philosophy of creative knowledge in which, it would seem, growing theoretical systems although only relatively true "together embody a supreme form of validity which the term 'truth' in its scholarly

meaning is quite unfit to express." I regret that I am unable to attach any positive meaning to this solution. It is, in any case, too briefly stated for detailed interrogation.

JOHN LAIRD.

Books received also:—

J. LAIRD. *Mind and Deity*. Gifford Lectures (second series) 1940. London: G. Allen & Unwin, Ltd. 1941. Pp. 322. 10s. 6d.

F. J. TEGGART. *Rome and China. A Study of Correlations in Historical Events*. Berkeley: University of California Press; London: Cambridge University Press. 1939. Pp. xvii + 283. 3 dollars; 18s.

M. R. DAVIE (Editor). *Summer Today. Selected Essays of William Graham Sumner with Comments by American Leaders*. New Haven: Yale University Press; London: Humphrey Milford, Oxford University Press. 1940. Pp. xxvi + 194. 2 dollars 50; 15s. 6d.

SIR WILLIAM BRAGG. *Science and Faith* (Riddell Memorial Lecture). London: Humphrey Milford, Oxford University Press. 1941. Pp. 24. 1s. 6d.

F. H. ROSS. *Personalism and the Problem of Evil. A Study in the Personalism of Bowne, Knudson, and Brightman*. (Yale Studies in Religion, 11.) New Haven: Yale University Press; London: Humphrey Milford, Oxford University Press. 1940. Pp. x + 51.

J. B. PRATT. *Can We Keep the Faith?* New Haven: Yale University Press; London: Humphrey Milford, Oxford University Press. 1941. Pp. vi + 218. 2 dollars 75; 16s. 6d.

W. A. R. LEYS. *Ethics and Social Policy*. New York: Prentice-Hall, Inc. 1941. Pp. xiii + 522. 4 dollars.

E. B. CASTLE. *The Undivided Mind* (Swarthmore Lecture, 1941). London: G. Allen & Unwin, Ltd. 1941. Pp. 102. 2s. 6d. and 1s. 6d.

A. C. EWING. *Reason and Intuition* (Henrietta Hertz Lecture 1941). London: Humphrey Milford, Oxford University Press. 1941. Pp. 43. 2s. 6d.

HUMAYUN KABIR. *Poetry Monads and Society* (Sir George Stanley Lectures 1941). University of Calcutta. 1941. Pp. x + 203.

R. GUÉNON (Tr. by W. MASSEY). *East and West*. London: Luzac & Co. 1941. Pp. v. + 257. 6s.

C. J. DUCASSE. *Philosophy as a Science: its Matter and its Method*. New York: Oskar Priest, 1941. Pp. xx + 242. 3 dollars.

Proceedings of the American Catholic Philosophical Association, Vol. XVI. *The Problem of Liberty*. Washington, D.C.: The Catholic University of America. 1940. Pp. 293.

Annual Report of the Smithsonian Institution, 1939. Washington: U.S. Government Printing Office. 1940. Pp. xiii + 567. 1 dollar 50.

INSTITUTE NOTES

The Annual General Meeting of the Institute was held at University Hall on July 22nd, when the Report of the Council and Statement of Accounts were presented and adopted. The Chairman of the Council, Sir W. David Ross, delivered an address entitled "The War and Philosophy," which was both profound and stimulating.

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PLANNING IN HUMAN AFFAIRS	by M. Chaning Pearce
THE FUTURE OF HUMANITY	by Professor Vibert-Douglas
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